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Report of Phase I archæological and historical investigations at the site of Fort Casimir, New Castle, Delaware

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FIGURE 1
Detail of 1906 USGS 15' quadrangle, showing New Castle and adjacent riverfront.

Contour interval 20 feet.
Datum is mean sea level.

ABSTRACT

This is a report of reconnaissance-level explorations at the site of Fort Casimir [N-1340], part of the New Castle Historic District, a National Historic Landmark. The Dutch fort of 1651 was the nucleus for the present city of New Castle. While the fort's general location has been well known, its exact location and the extent of its remains was in doubt. One school of thought held that the fort's remains had been washed away by the Delaware River, while others believed that it had been obliterated by later construction. Both predictions proved to be partly correct.

The Trustees of the New Castle Commons, the owners, cleared some modern pavement from the site early in 1986 and began to plan further improvements. The authors were engaged in July 1986 to examine the site and the records, to determine if any remains of the fort exist.

A buried ditch-like feature, contemporary with the fort, was found on the lot where the fort stood. This feature contained yellow Dutch brick, Netherlands majolica pottery, and other objects that often are found in seventeenth-century Dutch sites. With the existence of buried remains confirmed, the authors proposed a management plan for the fort site.

ACKNOWLEDGMENTS

It would be futile to attempt to acknowledge all the people who contributed to the success of this project. Many New Castle citizens helped. Mr. Willard G. Crichton, JR. did yeoman duty as local facilitator and go-between, in addition to his invaluable help with trowel and spade. Mrs. Mary Lou McIntyre assisted with backup photography and the use of her storage room for field equipment. The staff of the New Castle *Eagle* gave generously of front-page space for public relations.

Most of the members of the Trustees visited the site and took a personal interest in the work and helped with many small details. Mr. William Lane, chairman of the committee that oversaw the project, provided day-to-day support. Mr. Milton Hudson, the executive secretary of the board, also helped to move the project along by facilitating the paperwork.

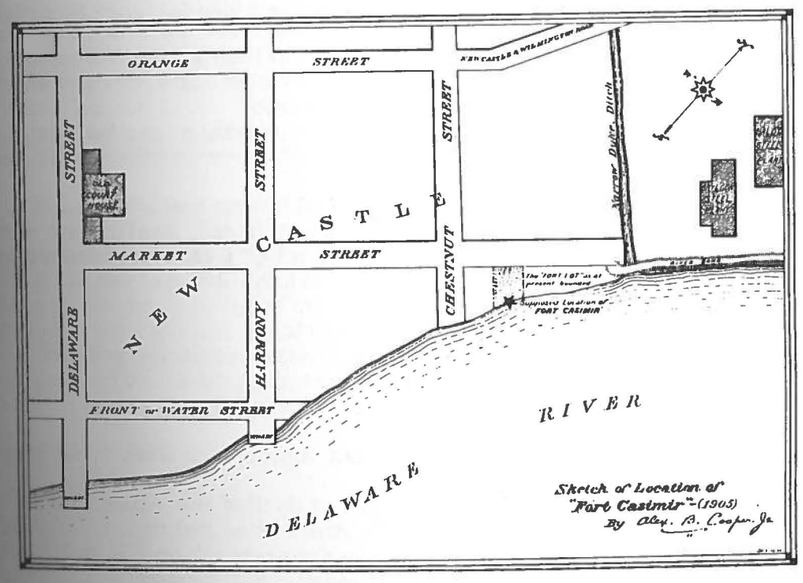
Analytical assistance was provided by three professional archæologists on state agency staffs: Ms. Alice Guerrant and Ms. Faye Stocum of the Bureau of Archæology and Historic Preservation and Ms. Cara Wise of the Division of Parks and Recreation. Mr. Paul Huey of the New York Bureau of Historic Sites and Mrs. Charlotte Wilcoxen of the Albany Institute took a morning out of their busy schedules to examine our potsherds. Charles T. Gehring of the New York State Library interrupted his vacation to visit with the authors and to discuss the project results.

INTRODUCTION

In 1651, Peter Stuyvesant ordered removal of the Dutch West India Company's South River headquarters from Fort Nassau, near the present Gloucester City, New Jersey, to Sand Hook, site of the present city of New Castle, Delaware. He called the new establishment Fort Casimir. Dutch traders soon built their houses in a row along the riverfront below the fort, creating the community of New Amstel, now known as New Castle.

Standing as it did on a sandy hook of land that jutted northward into the marsh, the fort was physically separated from the rest of the community, which stood on an adjacent hill downstream. After twenty years, it was abandoned and thereafter was virtually forgotten. Alexander Cooper, in a 1905 paper, reestablished the fort's location through documentary research, but postulated that "most, if not all of the soil whereon the Fort stood is now buried beneath the ceaseless ebb and flow of the tide."[1]

FIGURE 2
Alexander Cooper's map of 1905, showing the location of Fort Casimir.



[1] Alexander B. Cooper, *Fort Casimir, the starting point in the history of New Castle in the State of Delaware, its location and history, 1651-1671* (Wilmington, 1905), page 20.

Cooper's conclusion was based upon his personal recollection of erosion along the shore, and upon the presumption that the fort stood on a point or tongue of land that projected into the river. Since the science of historical archæology was virtually unknown at the time, Cooper's assumption went unchallenged.

In 1925, the site at the foot of Chestnut Street was developed as the western terminus of the New Castle-Pennsville ferry, which operated for another quarter-century. The ferry company paved much of the property and cut away hills to make flat parking lots. Large areas of wetlands were filled as well.

With construction of the Delaware Memorial Bridge, the ferry closed and the state bought the company's assets. Buildings on the site were used by the State Highway Department and its mosquito control division. Finally, in 1966, the property was conveyed to its present owner, the Trustees of the New Castle Commons. In 1986, the trustees removed much of the blacktop pavement over the old ferry approach and began a program of landscaping.

Since the fort site could be damaged by planting or earthmoving, the Trustees engaged the authors to conduct a preliminary investigation to determine the location of any surviving remains of the fort and to suggest plans for their protection. Scope of the work was to be consistent with a Phase I cultural resources survey. The goal of such a survey is to identify any archæological remains, and to attempt to define the limits of any sites in the study area. In this case, the goal was to determine if signficant remains of Fort Casmir still exist. The most important product of the project was to be a plan for future treatment and preservation of the site, which is included in this report.

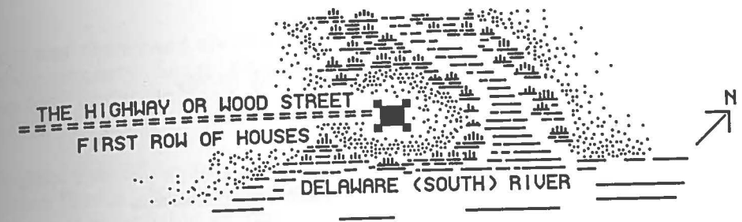


FIGURE 3

Sketch map of Sand Hook with conjectural reconstruction of 1651 topography (no scale).

BACKGROUND

The Fort Casimir site lies near the intersection of Second Street and Chestnut Street in New Castle, between the settled part of town and the river. The ground is relatively level, lying at the foot of a ridge upon which the city was built.

Physical geography and environment

Second Street, originally known as the highway, Land Street, Dyke Street, Market Street, or Wood Street, is the oldest street in New Castle. At its north end is the foot dyke, which helps to drain the marshes behind the townsite. The earliest maps show considerable marshland where streets and buildings are now. A small sandy hill known as Bull Hill lay towards the northeast side of the Sand Hook. It was connected to the larger hill to the south [on which the town proper stands] by a narrow ridge that ran in the vicinity of Market [Second] Street. Today's Second Street is fronted with rowhouses and detached houses on small lots. A playground occupies the space that formerly was the public burial ground and an earlier cemetery allegedly used by the Presbyterians.

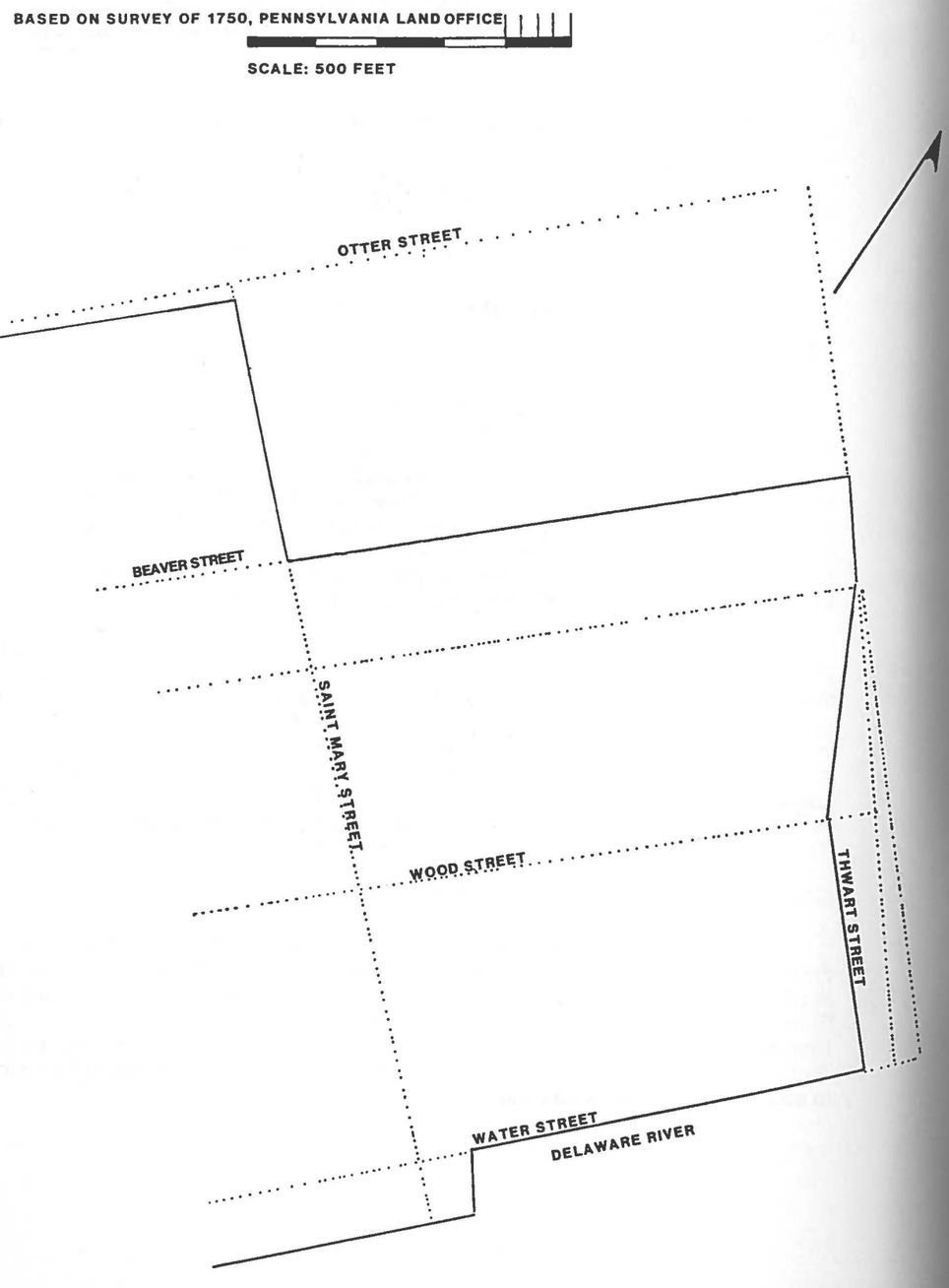
Much of the land surrounding Bull Hill on the west, north, and east (river) sides is made or drained land. The filling and draining process continues; the lowground next to the playground serves as a tip for inert fill even today. Along the river's edge the filled ground gives way to marsh. Front Street, or the Strand, would lie along the shore if it were cut through. On the south end of the property, below Chestnut Street, the hill has been cut away, with six or eight feet of soil removed in places. Bull Hill also has been cut away in a gradual levelling process over several generations. This process of levelling and filling has radically altered the landscape. Instead of undulating dunes and marshes, the vicinity of the fort today appears to be a large level plateau in the marsh.

Geographical changes through time

Fort Casimir was built on the river (east) side of Bull Hill, then a virtual island, elevation about eight feet, in the marsh. The stream that is now the town ditch, which flows north of Bull Hill on the townsite's norther extremity, was a tidal stream meandering through the low "valley." The marshes and stream formed a natural moat around the fort. Houses south of the fort were built along the "highway" that led into the country beyond. As the town developed, the highway was formally established as a street and people began to take up property on its landward side.

FIGURE 4

Redrawing of the 1750 survey



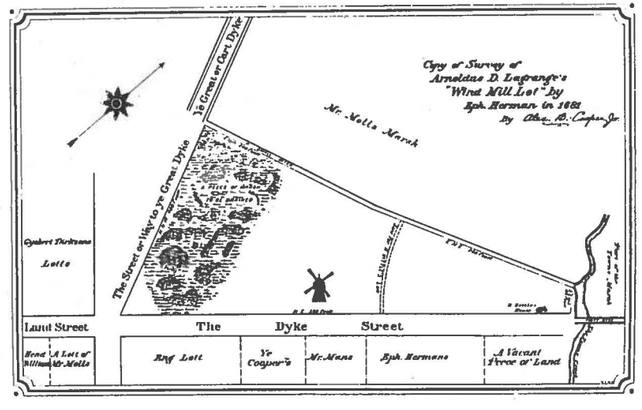
The fort was abandoned about 1671 and demolished about 1679, when Englebert Lott took over the property. Since Lott was a cordwainer, he may have started a tanyard on the ruins of the fort. Under the terms of his grant, Lott was to leave room for a street to be opened to the dyke.

The original plan of the town has been lost. There was an old Dutch map, probably made by Andreas Hudde, that survived into the Duke of York era. Aside from plots of isolated lots, there is no reliable overall mapping older than 1750 (figure 4). This oldest surviving map was apparently an attempt to define the boundaries of the town. Its most interesting feature for the present study is the indefinite location of Thwart (Chestnut) Street[2] Since the present course of Chestnut Street goes through land that was then extremely low, it is possible that the original course of the street was on higher ground south of its present alignment.

More information on the original location of Chestnut Street comes from a circa 1681 survey for Arnoldus de la Grange, who built a windmill on the back side of Bull Hill inland from the site of the fort. Figure 5 is Alexander Cooper's 1905 redrawing of the survey of that 1681 grant. This survey shows the sharply-angled street to the Cart Dyke or Broad Dyke beginning at Land (Second) Street. Today it begins at Third Street Near the present intersection of Second and Chestnut streets was a marsh that de la Grange was obliged to drain.[3]

FIGURE 5

Alexander Cooper's redrawing of the 1681 Arnoldus de la Grange survey of the windmill lot. Englebert Lott's fort lot is in the lower left corner, at the intersection now known as Second and Chestnut streets. Mr. Moll's lot was formerly the site of a magazine.

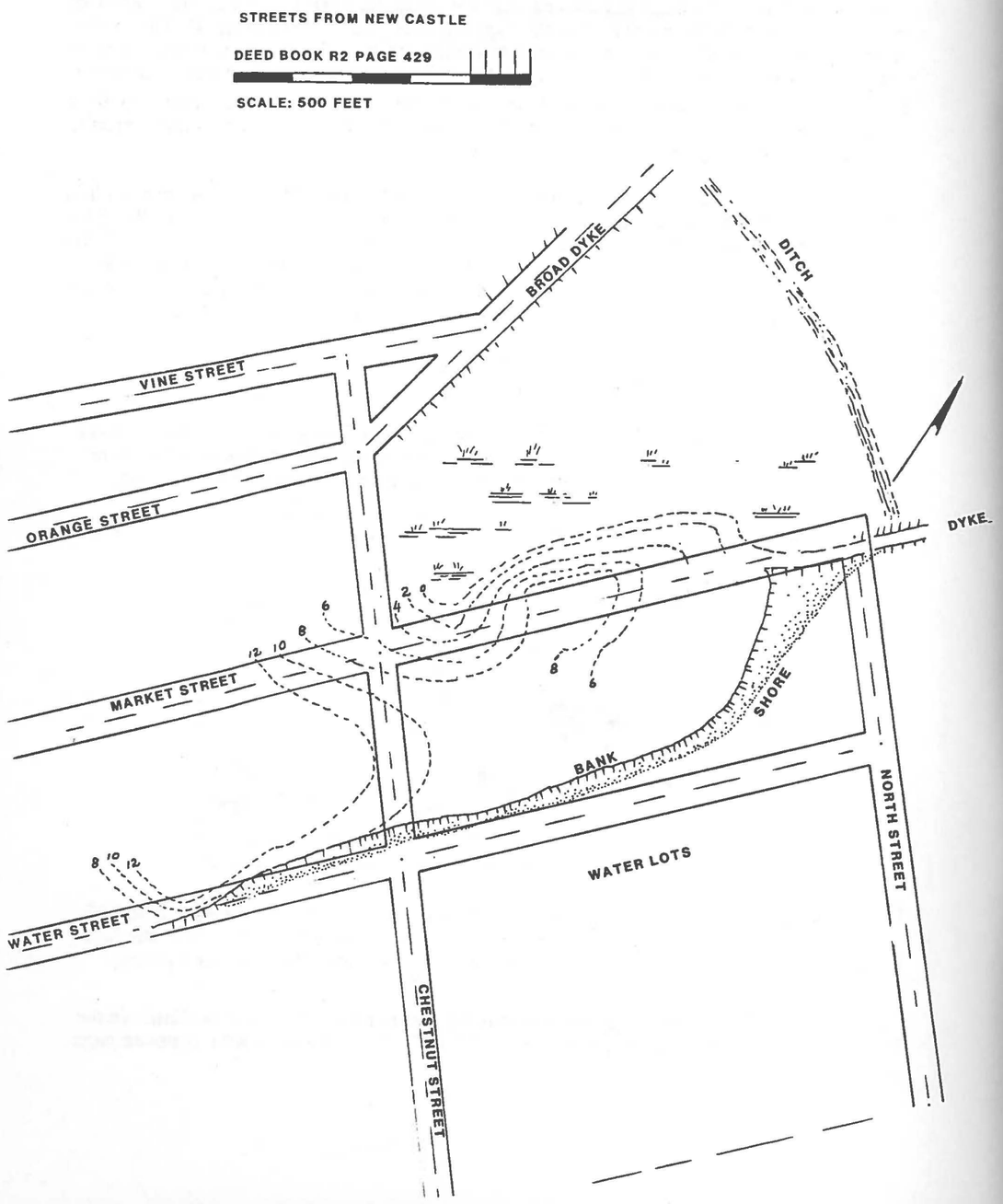


[2] Figure 4 is redrawn from a copy made in 1792 from a map made November 16 and 17, 1750. The original was then in the Pennsylvania Surveyor General's office (now the State Land Office). The copy is now in the Delaware Archives among the loose land papers.

[3] Alexander B. Cooper, *Fort Casimir, the starting point in the history of New Castle in the State of Delaware, its location and history, 1651-1671* (Wilmington, 1905), opposite page 30.

FIGURE 6

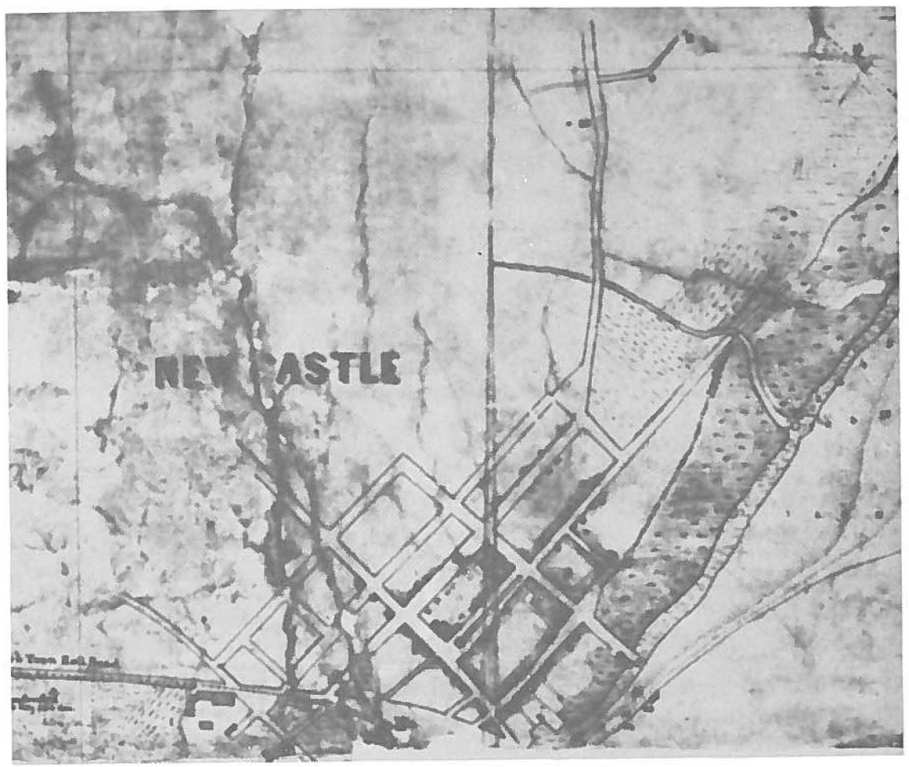
Adaptation of Latrobe's 1804 street survey, redrawn to show topographical contours from the profiles in the original drawings.



In 1804 the English-born engineer Benjamin Henry Latrobe made a survey of New Castle streets, now in the custody of the Delaware Division of Historical and Cultural Affairs. The purpose of the survey was to design drainage, but in the process Latrobe created the town's first accurate topographical survey. Figure 6 is a redrawing of the Latrobe survey in the style of modern contour maps. Latrobe included phantom streets, such as North Street and the extensions of Chestnut and Water streets below the low water mark. Chestnut street beyond Second Street existed on paper only for another half-century.[4]

FIGURE 7

Detail of the manuscript Coast and Geodetic Survey map of 1840, showing the north end of New Castle. Chestnut Street has not been cut through. Marshes extendwell beyond the line of Front Street (Water Street or the Strand) in the vicinity of the fort site, but Chestnut Street has not yet been cut through between Front and Market streets.



4 This document is now known as the Latrobe Survey, even though much of the work was done by his apprentice William Strickland, who later did another map that is known by his name.

The next reliable topographical study of the site was made in 1840 by the U. S. Coast and Geodetic Survey. Figure 7 is a detail taken from the original drawing, which was published in 1848 on a reduced scale.[5]

In 1851, Elihu Jefferson obtained an act of the General Assembly permitting him to build piers from the lot into the river so that he could build a coal-loading facility.[6] Jefferson owned essentially the same property now owned by the Trustees. By 1868, when the Beers *Atlas* was published, Jefferson had built the row of houses that now stands along Second Street. He had two buildings, probably associated with his coal business, near the shore.[7]

FIGURE 8

View of the parking lot, from the vicinity of the test excavations, looking northwest toward the row of houses Elihu Jefferson built on the site of the fort.

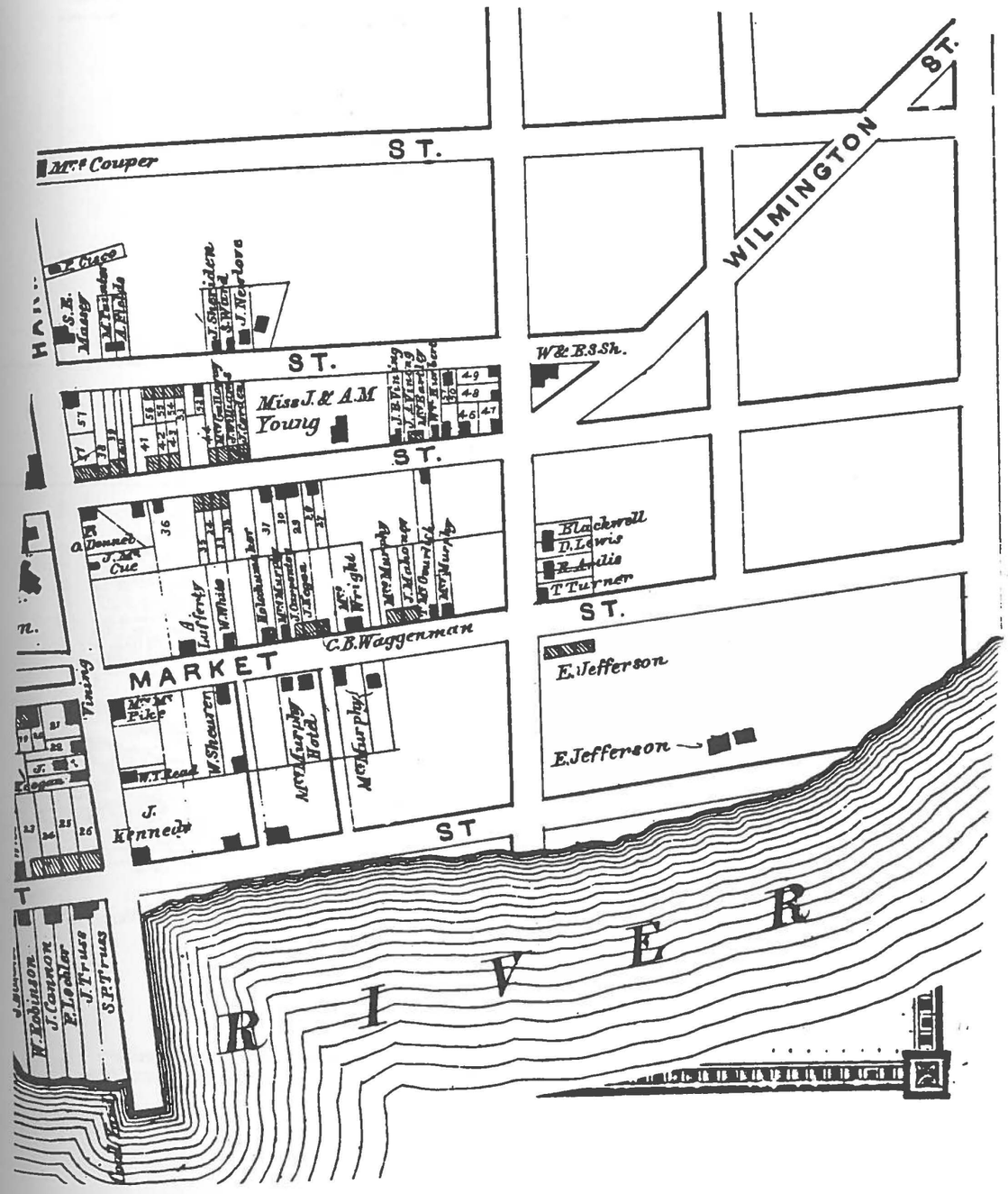
5 U. S. Coast and Geodetic Survey, *Map of Delaware Bay and River, No. 133*, 1840. Photocopied by National Oceanic and Atmospheric Administration.

6 "An Act to confirm the title of Elihu Jefferson in a certain lot of land in the town of New Castle and for other purposes," volume 10, *Laws of Delaware*, chapter DXLVI, February 21, 1851, manuscript, Delaware Archives.

7 D. G. Beers, *New Topographical Atlas of the State of Delaware* (Philadelphia 1868).

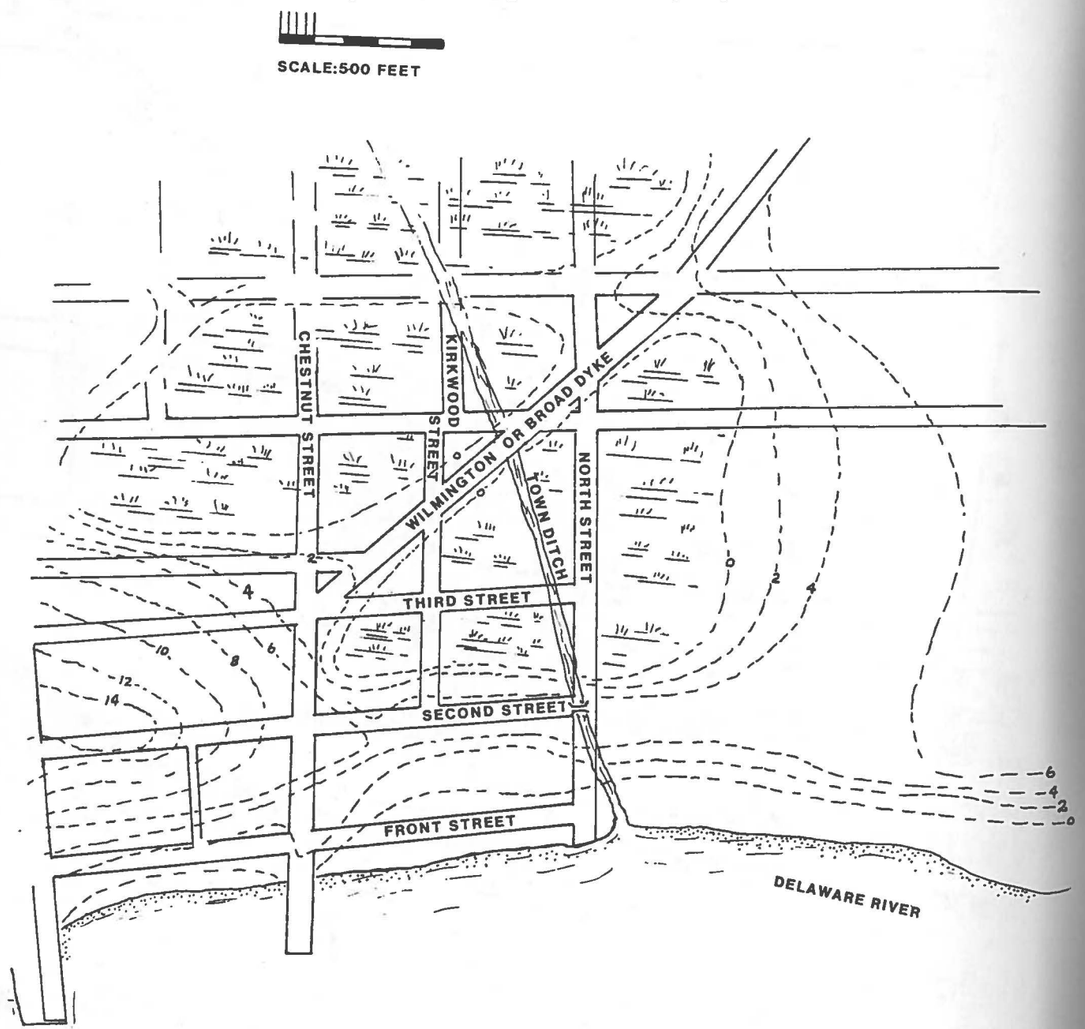
FIGURE 9

Detail of Beers Atlas *plate, 1868, showing the fort site with Elihu Jefferson's buildings.*



Remington and Vosbury, consulting sanitary engineers of Camden, New Jersey, made a detailed topographical survey of New Castle in 1927. Figure 10 is traced from this survey, a copy of which is filed at the city maintenance garage. By the time of this map, the ferry wharf had been established and some filling had taken place in the block between Front and Second streets The hill between Chestnut and Harmony streets had not yet been cut away. The fictional North and Kirkwood streets remain on the plot.[8]

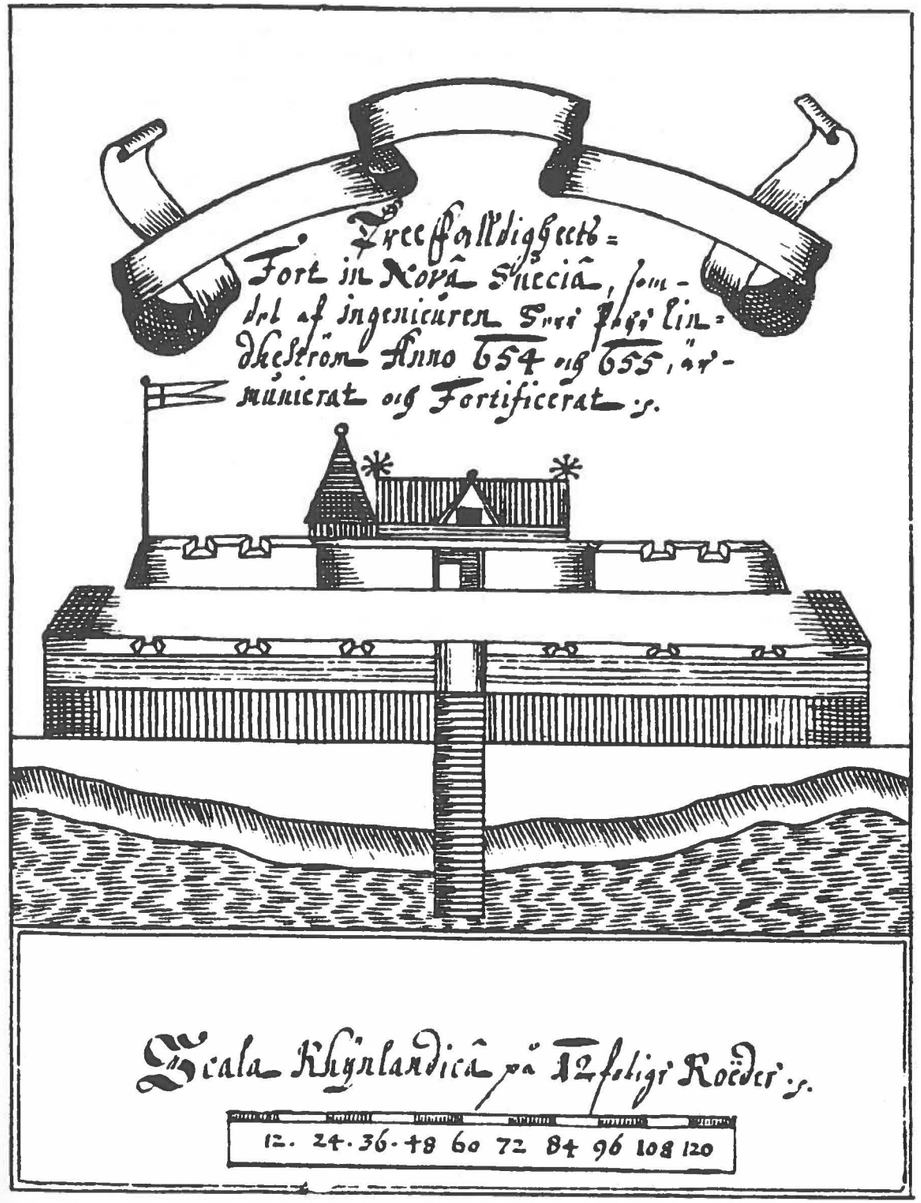
FIGURE 10
Detail redrawn from the Remington and Vosbury map, 1927



[8] Remington and Vosbury, Consulting Engineers, *City of New Castle Delaware Sanitary Sewerage System Index Map*, 1927, on file at the city maintenance garage.

FIGURE 11

Lindeström's drawing of Fort Trinity, from a microfilm at the University of Delaware.



CHRONOLOGICAL DOCUMENTARY HISTORY

Since 1638, the Dutch and Swedes had lived together on the South [Delaware] River without posing a military threat to one another. The two nations' headquarters, forts Christina and Nassau, were so positioned that neither could interdict the other's shipping. In 1643, the Swedes had tried to control the river by building the short-lived Fort Elfsborg, but the mosquitoes forced its abandonment. But for the most part, the two nations had lived at peace, albeit uneasy peace. In the spring of 1651, after virtually ignoring their New World holdings for nearly a decade, the Swedes began to swagger again. First they built a house that blocked the guns of a Dutch fort on the Schuylkill. Then the Swedish government at home refused to negotiate a boundary between the two colonies.

Peter Stuyvesant acted rather on his own in 1651 when he moved the Dutch trading garrison from the established Fort Nassau on the east bank of the Delaware to his new Fort Casimir at Sand Hook. He clearly realized, as his distant employers could not, that the Swedes at Fort Christina were a serious threat to Dutch hegemony over the Delaware.

Construction of the town began soon after the fort was built. Peter Lourensen received the lot "fourth in number from the fort" in 1652. This lot was 300 by 62 feet [Rhineland feet of 12.36 English inches], and lay northeast of the "highway", as did nearly all the original lots along the shore.[1] Since the governor waited five years before recording the deed, it may be assumed that Lourensen was in fact settled there, and that some who failed to settle their lots may have gone unrecorded. Claes Pietersz claimed his lot on December 16, 1652, but it was not officially granted until April of 1657.[2]

On May 20, 1654, a new Swedish governor, Johan Rising, arrived in Delaware River and anchored off the abandoned Swedish Fort Elfsborg. The Dutch commander of Fort Casimir sent Adrian van Tienhoven and a party aboard the Swedish ship to investigate. When Rising informed the delegation that he would take Fort Casimir, they replied "that they cared not who possessed the fort as long as they were allowed to dwell there safely and freely." The next morning, Trinity Sunday, the Swedish ship sailed to Fort Casimir. Lieutenant Sven Sküte went ashore with "three files of musketeers" to demand the fort's surrender. While Sküte was negotiating with the commander, Lieutenant Elias Gyllengren marched his troops into the open gate and took the fort. The Dutch commander had his servant lower the fort's flag so that the Swedish flag from the ship could be raised. At the time of its first surrender, Fort Casimir was garrisoned by nine soldiers with thirteen cannon and no powder. The muskets were at the gunsmith's.[3]

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[1] Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch Volumes GG, HH, and II, Land Papers* (Baltimore 1980), page 93.

[2] *Ibid.*, page 87.

[3] Amandus Johnson, *The Swedes on the Delaware 1638-1664* (Philadelphia 1927), pages 263-266.

After they took over the fort, the Swedes made some repairs and changes, outlined by the Swedish engineer Per Lindeström in his memoirs:[4]

> From Christina River to the Sandhock the soil is equally rich and fertile to the above described, an even and level land, here and there settled by Finns. It is easy to come to shore there with vessels. At the Sandhock 21 Holland Colonists have erected their dwellings on Her Royal Majesty's land [marked with] the Arms of Sweden. At the Sandhock the Hollanders have also fortified and built a fortress with 4 bastions, which the Hollanders called Fort Cassimer. However, when we arrived in New Sweden, it had fallen into almost total decay. But after it had been captured by us at our arrival in the country on Trinity Sunday, 1654, this fortress was called Fort Trinity by the Swedes; and afterwards the said fortress was built up anew, practically from the foundation, much stronger fortified and improved with bastions by the above-mentioned Mr. Per Lindheström.

The former Dutch commissary of Fort Casimir, Andries Hudde, worked for the Swedes during the time that they held the fort. He was employed making maps of the river for them, and appeared to be a loyal turncoat. When the opportunity presented itself, however, he returned to New Amsterdam, undoubtedly with valuable intelligence about the Swedish position. Governor Rising reported on the condition of Fort Trinity in a letter to the commercial college in Stockholm. He reported that there were about 22 Dutch houses already at Sandhook. The most vexing problem, apparently, was armament:[5]

> Cannon, iron as well as brass cannon, are here greatly needed by us, as well for service on the sea as on the forts, especially for the defence of the river at Trinity, where the cannon which the Hollanders left are mostly useless, and we do not know whether Her Royal Majesty will give them the cannons back again with everything else found in the fort or not. We have therefore borrowed four fourteen-pounders from the ship and placed them in an entrenchment before the fort, the better to sweep the river straight across. At Christina other guns are also needed, for most of the old ones are useless. We need a large quantity of powder and bullets, lead and other ammunition. Muskets and guns we have enough at this time, but good French fusils are much more used here in the country and in addition bags of leather with three or four compartments, in which one could place cartridges; these are many times better in the rain in the woods than bandeliers and match-lock muskets, and they are much sought after by the savages. We also intend to put flint-locks on a large number of our muskets.

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[4] Per Lindeström, *Geographia Americae* (Philadelphia 1925), page 173.

[5] Johan Rising to Royal Commercial College, July 13, 1654, in Albert Cook Myers, editor, *Narratives of Early Pennsylvania, West New Jersey and Delaware 1630-1707* (New York 1912), pages 136-151.

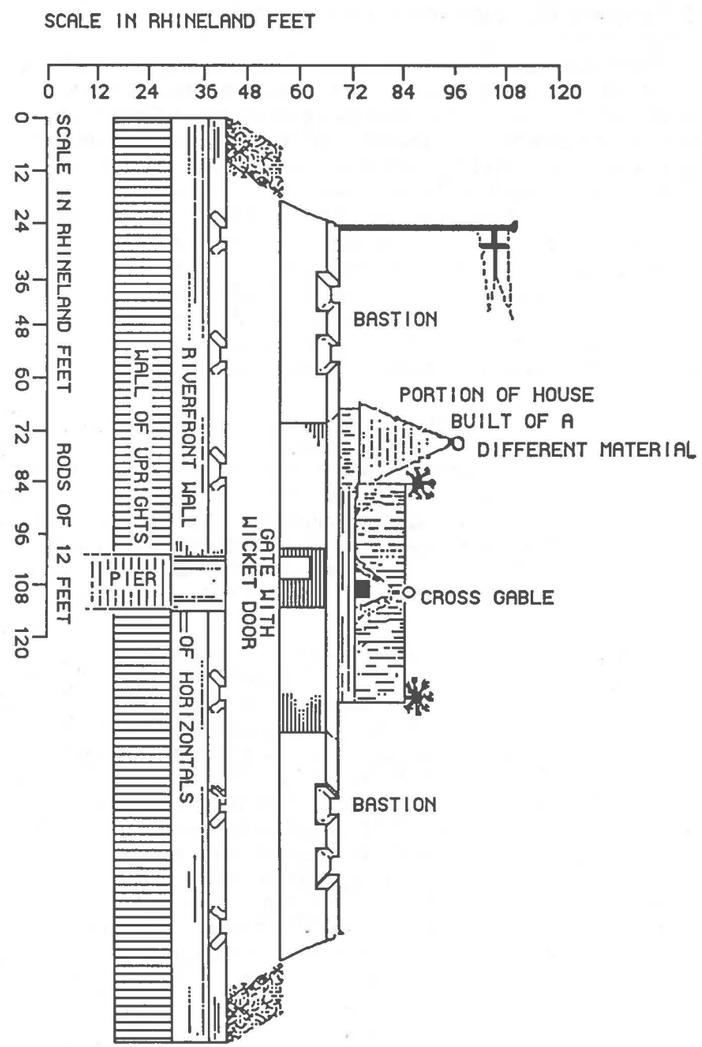

FIGURE 12

Fort Trinity, formerly Fort Casimir, as drawn by the Swedish engineer Lindeström, redrawn with notes from the original drawing (figure 11). A redrawn perspective version of this view was included in Cooper's history.

Spiritual affairs at Trinity were in the hands of Rev. Peter Laurentii Hort, who arrived in 1654 and returned home with Governor Rising after the Dutch reconquest. Rising described him as "both materially and spiritually a poor priest."

During 1654, Fort Trinity was damaged by a storm and accompanying high water that washed away the wall up to the palisades.[6]

Governor Rising knew that he would soon have to pay the price for taking Fort Casimir. In his June 1655 report to the government, he said that the Dutch "threaten strongly that Stufvesand, when he returns from W. India and Curacos, where he went last fall with three ships (among which the *G[yllene] Haye* was one) will come here and capture Fort Casimir, which we now call Trinity. But if he comes we will see to it that he is received in the manner of S. Martens (where he lost one of his legs), and we are in no wise afraid about this. ..." Rising was taking measures to make the colony more secure, repairing the turf walls of Forth Christina. Sven Sküte was "diligently working on Fort Trinity, where already two bastions with the curtain are ready, as also a fine rampart on the water side in front of the fort." This rampart may be the wall that appears on the waterside in the drawing as a row of upright members. The Hollanders at Trinity had left for Manhattan "two or three weeks ago"[7] The reason for their departure would soon become evident.

Stuyvesant's threatened recapture came in September. In his "relation" of the episode, Govenor Rising alluded to the "unexpected" attack by Stuyvesant and tried to blame the commander at Fort Trinity for giving up. According to Rising, "we had caused Fort Casimir to be supplied with men and munitions to the best of our ability, and had drawn up a resolution in writing to defend the fort in case the Dutch should attack it, ordering Captain Schüte, the commandant, to send on board their ships, when they approached, and demand of them whether they came as friends, and in any case to warn them not to run by the said fort, upon pain of being fired upon. ..." Rising was righteously indignant when "... Captain Schüte not only suffered the Dutch ships to pass the fort without remonstrance or firing a gun," but capitulated in dishonor, on board a Dutch ship.[8]

On September 10, 1655, a Dutch expedition of 317 men in seven ships of various sizes sailed from New Amsterdam to recapture Fort Casimir from the Swedes. Johannes Bogært described the encounter in his letter to Hans Bontemantel:[9]

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[6] Amandus Johnson, *The Swedes on the Delaware 1638-1664* (Philadelphia 1927), page 295.

[7] Johan Rising to Royal Commercial College, June 14, 1655, in Albert Cook Myers, editor, *Narratives of Early Pennsylvania, West New Jersey and Delaware 1630-1707* (New York 1912), pages 156-165.

[8] Johan Rising, "Relation of the surrender of New Sweden," 1655, in Albert Cook Myers, editor, *Narratives of Early Pennsylvania, West New Jersey and Delaware 1630-1707* (New York 1912), pages 170-176.

[9] Johannes Bogært, letter to Hans Bontemantel, 1655, in J. Franklin Jamieson, editor, *Narratives of New Netherland 1609-1664* (New York 1909), pages 383- 386.

> . . . The 10th, after breakfast, the fleet got under way, and ran close under the guns of Fort Casemier, and anchored about a cannon-shot's distance from it. The troops were landed immediately, and General Stuijvesant dispatched Lieutenant Dirck Smit and a drummer and a white flag to the commandant, named Swen Schoeten [Sven Sküte], to summon the fort. In the meantime we occupied a guard-house about half a cannon-shot distant from the fort; and at night placed a company of soldiers in it, which had been previously used as a magazine.

Stuyvesant's account is virtually the same:

> . . . We passed Fort Casimier about eight or nine o'clock without any display of hostility on either side, and anchored the distance of a salute gun's shot above the said fortress. We landed our men immediately and sent Capt. Lt. Smith with a drummer into the fortress to demand restitution of our property. The commander reqested a delay until he had communicated with Governor Rysingh; his request was denied. ...

The articles of capitulation specified that Sküte would be permitted to carry out of Fort Casimir the Swedish cannon, which consisted of "four iron-pounders [sic] and five shot-pieces, i.e., four small and one large."[10]

To administer Fort Casimir, Stuyvesant appointed Jean Paul Jacquet, whose instructions set forth rules for the future growth of the Fort Casimir community. Trading vessels were to do their business "with the savages or Christians" at Fort Casimir or on the shore just below the fort. Swedes and Indians were to be restricted in their visits to the fort. Security of the fort was to be protected by building restrictions, too:

> He shall not grant building or farm lots on the edge of the valley of Fort Casimir, to wit between the Kil and the aforesaid Fort nor behind the Fort, but he shall reserve the land for reinforcements and outworks of the Fort; likewise in order to favor more the concentrated settlements on the Southside of the Fort, he shall upon occasion clear a good street behind the houses already built and lay out the same in convenient order and lots of about 40 to 50 feet width and one hundred feet length, the street to be at least 4 to 5 rods wide.[11]

Vice-director Jaquet on December 18, 1655, held court, possibly in the fort, to audit the accounts of commander Dirck Smit. The first item in contention was a table and a

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10 Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch, Volumes XVII-XIX, Delaware Papers (Dutch Period), a collection of documents pertaining to the regulation of affairs on the South River of New Netherland, 1648-1664* (Baltimore 1981), pages 38-40.

11 B. Fernow, translator and editor, *Documents relating to the History of the Dutch and Swedish Settlements on the Delaware River* (Albany 1877), pages 115-117.

wardrobe. Jan Stalcop, the Swedish gunnery sergeant, claimed he had sold them to Smit. The vice-director offered to buy the table from Smit, who refused to sell it.

The former Swedish commander, Sven Sküte, petitioned for payment from Smit for various items of his personal property, including four sill beams. Sküte claimed that he had bought the four beams from Claes de Smit for 40 guilders and had used them in building the guard house. Sküte also claimed £100 from the Dutch company for "a hut behind the fort called the bathhouse."[12]

Jaquet's Christmas 1655 survey of Fort Casimir uncovered deplorable conditions:

> Whereas the honorable lord, Jaquet, has examined the condition of this fort, Casemier, and not found the same as expected; therefore, we the undersigned at the aforesaid lord's request have inspected the same and found the fort to be completely decayed in its walls and batteries and that the aforesaid fort, if a good work is to be made of it, must be rebuilt from the ground up since the outer work has for the most part already fallen down and that which still sands must necessarily fall since it has been torn open and dislocated as a result. ...[13]

With the Swedish threat dissipated, settlement of New Amstel could resume. Geertruydt Jacops, widow of Roelof de Haes, was granted a lot in the first row north of the highway, south of the lot Claes Pietersz had settled in 1652, and a larger tract inland of the road 31 rods deep behind the lot of Jan Gerritsz. On November 30, 1656, two important figures in the community's history obtained grants for land. Andries Hudde was granted lot 15 "for a house and garden," below the fort between the lots of Sander Fenix and Jan Andriessen, measuring 62 by 300 feet Rhenish measure. Alexander Boyer obtained a "plantation" lying north of Fort Casimir containing 24 morgens.[14] During 1656 and 1657, a number of deeds were recorded, many of which were merely confirming ownership in lots that had been settled as early as 1652.

Jacob Alrichs arrived in May 1657 to take over Fort Casimir, which was to become the headquarters for City of Amsterdam interests in South River. The West India Company moved its operations to Fort Christina, renamed Altena. Alrichs apprised Stuyvesant of the poor condition of the fort:

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12 Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch, Volumes XVII-XIX, Delaware Papers (Dutch Period), a collection of documents pertaining to the regulation of affairs on the South River of New Netherland, 1648-1664* (Baltimore 1981), page 48.

13 *Ibid.*, page 50.

14 Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch Volumes GG, HH, and II, Land Papers* (Baltimore 1980), pages 79, 86.

> ... that I require some oxen and horses to haul timber for repairing the fort which is much decayed on the shore side; in other places it is in such a state that it requires a great deal of timber.[15]

Two Dutch ministers wrote to the Classis of Amsterdam in August 1657, reporting on the state of religion and other matters in the colony:[16]

> . . . On the South River, matters relating to religion and the church have hitherto progressed very unsatisfactorily; first because we had there only one little fort, and in it a single commissary, with ten to twenty men, all in the Company's service, merely for trading with the Indians. Secondly: In the year 1651 Fort Nassau was abandoned and razed, and another, called Fort Casemier, was erected, lower down and nearer to the seaboard. This was provided with a stronger garrison, and was reinforced by several freemen, who lived near it.
>
> But the Swedes, increasing there in numbers, troubled and annoyed our people daily. After they had taken Fort Casemier from us, they annoyed our countrymen so exceeingly, that the South River was abandoned by them. However in the year 1655 our people recovered Fort Casimier, and now it is held by a sufficiently strong garrison, including several freemen, who also have dwellings about. ...

New Amstel was in great need of bricks for chimneys and planks for closing up houses, according to Alrichs. The source of such materials, even after the town had been established for six years, was Fort Orange, now Albany. In September of 1657, he asked Stuyvesant to send as many bricks as the colony's vessel could hold and 3 or 4 hundred good planks.[17]

Alrichs, like most of his predecessors and successors, tried constantly to rebuild the decaying fort. In March 1658, he asked Stuyvesant to send 300 "Fort Orange planks" that he needed for the storage area in the magazine and quarters for the commissary, as well as for his own house in the fort.[18] Alrichs complained that the captain posted only two guards

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15 Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch, Volumes XVII-XIX, Delaware Papers (Dutch Period), a collection of documents pertaining to the regulation of affairs on the South River of New Netherland, 1648-1664* (Baltimore 1981), page 100.

16 Johannes Megapolensis and Samuel Drisius to the Classis of Amsterdam, August 5, 1657, in J. Franklin Jamieson, editor, *Narratives of New Netherland 1609-1664* (New York 1909), page 395.

17 Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch, Volumes XVII-XIX, Delaware Papers (Dutch Period), a collection of documents pertaining to the regulation of affairs on the South River of New Netherland, 1648-1664* (Baltimore 1981), pages 111-112.

18 *Ibid.*, pages 116 and 119.

at night and one in the day on the fort, and that none were posted during the previous winter. Cornelis Haerperts de Jaeger established a brick kiln at Casimir in 1659, but he and his four servants were drunks and malcontents who caused Alrichs more trouble than they were worth to him.[19]

Lieutenant Alexander d'Hinojossa was alleged to have locked two prisoners in a "dark powder-hole," possibly in Fort Casimir, according to William Beeckman. Vice-director Alrichs died December 30, 1659 and recommended in his will that d'Hinojossa be his successor. This choice was not accepted lightly, for as William Beeckman reported from Altena, the residents wanted Stuyvesant to appoint another vice-director. In spite of his unpopularity, d'Hinojossa stayed.[20]

Under orders from Stuyvesant, Beeckman inventoried the Alrichs estate. D'Hinojossa complained that city property was being counted along with Alrichs'. In response to this "mumbling and grumbling," Beeckman invited the Lieutenant to participate in the inventory. Beeckman claimed that "the City's stockings, shoes and other items lay strewn all over the room so that we constantly had to walk over them." D'Hinojossa responded that "the City would view it most unfavorably that their council chamber had been so dispoiled of chairs, books, paintings and other items; ..."[21]

Location of the first church at Fort Casimir remains in doubt; it was not inside the fort, but was nearby. In 1660, a report of Indians drinking mentioned a church by a beach. In May 1662 William Beeckman reported seeing a proclamation nailed to its door.[22]

Fort Casimir fell again in 1664 to the English under Robert Carr, representing the Duke of York. A new commander, Captain John Carr, in 1671 proposed several improvements for the town of New Castle, first of which was the replacement of the fort:[23]

> As first that a Block-House may be erected in some convenient Place of the Towne where a Constant Watch may be kept (now the Fort is fallen to Ruine and Decay) for their Common Defence; the which will cost noe great Matter, and may be risen at the Charge and Expence of the Inhabitants of the Towne and Plantacions upon the River, who will not be backwards (if any Order shall be issued forth for it) in contributing towards the same.

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19 *Ibid.*, page 139.

20 *Ibid.*, pages 183-184.

21 *Ibid.*, page 205.

22 *Ibid.*, pages 205, 269.

23 Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch, Volumes XX-XXI, Delaware Papers (English Period), a collection of documents pertaining to the regulation of affairs on the Delaware, 1664-1682* (Baltimore 1977), page 25.

Carr's proposal was accepted, together with a long list of other proposals, such as new roads and regulations of trade. The thirteenth, and last, item on the list also related to the fort:

> That the Houses in the Forte being so greatly decay'd as they cannot stand long, their Tiles, Brick, Iron, and other Materialls may be taken down in time, and preserved for the building a new House in their Roome, when opportunity permitts.

This proposal also was approved by the Governor. If this order was carried out, the essential parts of the twenty-year-old fort were carried away before the blockhouse was built. A year later, the blockhouse project had been begun, but was not being pursued. Captain Edmund Cantwell, the sheriff, asked the governor for permission to levy a tax on the inhabitants of the river to pay for completion. The governor responded in August with a deadline; the blockhouse would be completed by the first of November, or he would levy a fine. The officers were left to decide among themselves how to pay for the project.[24] The new blockhouse was probably the fort that surrendered to the Dutch when they briefly retook New Netherlands in 1673 and 1674. Governor Andros wrote to Captain Cantwell in January 1674/5, stating that he would be visiting the Delaware in the spring. He acknowledged Cantwell's report that he had taken possession of the fort. He mentions "entertaining a man for the Fort," possibly a caretaker.[25]

The final replacement of the old fort was ordered by the Governor's council on September 15, 1675:[26]

> Ordered, That ye Block-house at Newcastle bee removed & built on y^e^ back side of ye Towne about y^e^ middle of it, at or near y^e^ old Block house wherein there may be a Court house and a Prison also.

This old "block house" could have been the guard-house or old magazine a half cannon shot from the original fort that Stuyvesant had used in 1655. There clearly was something of that nature on the back side of town near the middle that was "old" by 1675. The site in question was the market square, approximately the site of Immanuel Church. Governor Andros in 1676 authorized the New Castle magistrates to build a prison in the fort, probably referring to the new "blockhouse" that had been authorized to replace the old

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[24] *Ibid.*, pages 38-41.

[25] Peter R. Christoph and Florence A. Christoph, editors, *New York Historical Manuscripts English; Books of general entries of the Colony of New York 1674-1688; Orders, warrants, letters, commissions, passes and licenses issued by Governors Sir Edmund Andros and Thomas Dongan, and Deputy Governor Anthony Brockholls* (Baltimore 1982), page 15.

[26] B. Fernow, editor, *Documents relating to the History of the Dutch and Swedish Settlements on the Delaware River, translated and compiled from original manuscripts in the office of the Secretary of State, at Albany, and in the Royal Archives, at Stockholm,* volume XII (Albany 1877), page 540.

fort.[27] In the following year, a chimney was built in the court room in the "forte fitt for y^e^ Court to sitt in in y^e^ winter Tyme,..."[28]

Engelbert Lott petitioned the court in November 1677 to give him the lot at the "East End of this Towne where the old forte formerly stoode, ..."[29] On January 8, the court granted Lott the old fort lot on condition that he level it and leave a space for a street.[30] Lott was a substantial citizen, being churchwarden of New Castle and a cordwainer by trade.[31] Part of the grant to Lott was a parcel that had been granted to the attorney Henry Vandenburg in 1673.[32] At a court on July 2, Vandenburg obtained a grant for another town lot that had been granted to Reyner van der Coulin but never seated.[33]

In 1679, Jasper Danckærts, who seldom had a good word for anything English, described New Castle in his journal:[34]

> What remains of it consists of about fifty houses, most all of wood. The fort is demolished, but there is a good block-house, having some small cannon, erected in the middle of the town and sufficient to resist the Indians or incursions of Christians, but it could not hold out long.

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[27] Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch, Volumes XX-XXI, Delaware Papers (English Period), a collection of documents pertaining to the regulation of affairs on the Delaware, 1664-1682* (Baltimore 1977), page 135.

[28] *Records of the Court of New Castle on Delaware 1676-1681* (Lancaster 1904), page 143.

[29] *Ibid.*, page 147.

[30] New Castle Surveys L_2, #44, Delaware Archives; New Castle Deed Book A-1, page 71, Delaware Archives.

[31] *Records of the Court of New Castle on Delaware 1676-1681* (Lancaster 1904), page 289.

[32] New Castle Deed Book A-1, page 70, Delaware Archives.

[33] *Original land titles in Delaware commonly known as the Duke of York Record* (Wilmington 1903), page 186; *Records of the Court of New Castle on Delaware 1676-1681* (Lancaster 1904), page 344.

[34] C. A. Weslager, *Dutch Explorers, Traders, and Settlers in the Delaware Valley* (Philadelphia 1961), page 211.

John Moll, one of the justices at New Castle, wrote in January 1679 to provincial secretary Matthias Nicolls about affairs on the Delaware. He asked for money to repair the fort, and to pay the old man who lived there.[35] This statement clarifies several other cases where the new blockhouse was called a fort; mentions of repairing a "fort" at this late date must refer to the blockhouse at the present site of Immanuel Church, since Casimir was already abandoned.

Edmund Cantwell, the surveyor on the Delaware, made a survey of the old fort lot on May 24, 1679. His description, as recorded in shorthand in his notebook, was:[36]

> Laid out for Englabert Lott two Lott of gronde situated in y^e^ Towne of new Castle & att y^e^ north East end therof one of w^ch^ Lotts being that whereon y^e^ ould foart stood y^e^ other being a Lott formerly Laid for henrik van der bugh being bonded as followeth to y^e^ South west w^th^ y^e^ high way or Streett w^ch^ Lead to y^e^ [ ] to y^e^ north East w^th^ y^e^ Comon not as yet taken up to y^e^ South East w^th^ y^e^ Streett by y^e^ water Side to y^e^ northwest w^th^ Land Streett being Longe to y^e^ Southwest next y^e^ high way two hondered & Seaventy & Sevean foott to ye north East two hondered & Sixty Eight foott being broad before and beyhind two honered & twenty foott wth Expresse Condiction that y^e^ said Lott shall Levill & make even y^e^ ould foart & Leave a Sufficieint Street or high way att y^e^ water side Laid out y^e^ 24 Day of may 1679
>
> *Pr* Ed Cantwell:–

The officially recorded version is found in Alexander Cooper's history of Fort Casimir, where he quoted the recorded warrant:[37]

> Laid out for Engelbert Lott, two lotts of Ground situated in the towne of New Castle and att the North East end thereof, one of which lotts being the same whereon the Old Forte stood, the other being a lott formerly laid out for Hendrick Vander Burch, being bounded as followeth: — To the South West with the Highway or street which leadeth to the woods, — To the North East with the common, not yet taken up,— To the South East with ye street by ye water side, — To the North West by Land Street. Being long to the South West next the Highway 277 ft. to the north east 268 ft. being broad behind and before 220 feet, with express condition that the said Lott shall and will make even the Old Forte and have a sufficient street or Highway at the Water side laid out the 24th of May 1679.

The lots north of the fort lot were taken up by several owners, who came into court on April 6, 1680. Abraham Mann claimed a lot sixty feet wide just above "y^e^ old forte." The next sixty-foot lot was granted to Eldert Egberts Vannes the Smith. Ephraim Herrmann claimed the next lot, which was to be as wide as the space between the smith's lot and a lot along the little creek that had earlier been granted to James Walliam.[38]

William Sempill on September 6, 1681, asked the court to grant him the lot next to that of Engelbert Lott, if Hans Corderus the cooper failed to seat it according to law. Sempill's petition was granted and he eventually got the lot on May 2, 1682.[39]

On November 1, 1681, Arnoldus de la Grange was granted a triangular lot across Land Street from the fort lot, on the condition that he build a mill within a year and drain the marsh on the lot (Figure 5, above). The marsh in question, according to the plot, was next to the present intersection of Chestnut and Market streets. It was still marshy in 1927 (Figure 10, above). He was later granted a parcel of marsh at the Broad Dyke, formerly of John Moll.[40]

Lott's grant was reconfirmed by the commissioners of William Penn in a patent dated February 10, 1687. In 1707, Lott, now of New York, conveyed two lots where the old fort stood to Abraham Sandford and John Barber, New York cordwainers, and Jane Tuttoll, widow of Jeremiah Tuttoll .[41] The conveyance also included some other land that Vandenburgh had owned, but the nature of the business relationship between Lott and Vandenburgh is unclear.

During the Federal period, the lot was James Riddle's grass lot and was no longer called the fort lot. James Riddle was a trustee of the market square and of the New Castle Academy and one of the founders of the first fire company in town. He was one of the persons named in a 1784 Act of the General Assembly that authorized a group of citizens to improve the harbor of New Castle. The great fire of 1824 started in his house. When he died intestate in 1832, he left four children, of whom two survived to inherit the fort site.[42]

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35 Charles T. Gehring, translator and editor, *New York Historical Manuscripts Dutch, Volumes XX-XXI, Delaware Papers (English Period), a collection of documents pertaining to the regulation of affairs on the Delaware, 1664-1682* (Baltimore 1977), page 293.

36 Albert Cook Myers, editor, *Walter Wharton's Land Survey Register 1675-1679* (Wilmington 1955), page 92.

37 New Castle Deed Book A-1, page 71, Delaware Archives, transcribed in Alexander B. Cooper, *Fort Casimir, the starting point in the history of New Castle in the State of Delaware, its location and history, 1651-1671*(Wilmington, 1905), page 17.

38 *Records of the Court of New Castle on Delaware 1676-1681*(Lancaster 1904), page 406.

39 *Ibid.*, pages 412, 488-489.

40 *Ibid.*, page 498; Survey book "1700," Delaware Archives, pages 339 and 126.

41 New Castle Deed Book C-1, Delaware Archives, page 9.

42 J. Thomas Scharf, *History of Delaware* (Philadelphia 1888), volume 2, pages 866, 863, 869, and 878.

On April 24, 1841, Gunning Bedford Riddle of Chester, Pennsylvania, conveyed his half-share in the fort site to Elihu Jefferson. The property was described in the deed as being bounded on the southwest by land of Benjamin K. Pierce, northwest by Market Street, northeast by the poor burying ground, and southeast by Water Street "as laid out on Strickland's plot of said town of New Castle" and extending that breadth from Water Street 600 feet into the river.[43] Such extensions were called "water lots," as distinguished from the much older "bank lots" granted early in the eighteenth century along the river side of the Strand.

A few years later, Jefferson began to build a coal depot and marine railway, which required offshore construction on his water lot. The validity of Jefferson's title to the shore and offshore areas must have been contested, for the General Assembly passed an act in 1851 to legitimize his construction projects. Jefferson was allowed to build piers into deep water, but he was to permit the opening of Front Street through the property.[44]

Jefferson's heirs sold the fort site at auction July 24, 1873. Behind the houses he had built along Market Street was an alley ten feet wide. The larger remaining tract, between the alley and the river, was sold to Samuel Etchells, who also got a lot on Market Street. The description in the deed was made subject to the opening of Chestnut Street.[45]

Samuel and Mary Etchells sold a lot at the southeast end of the property in 1877[46] and another in 1888.[47] The remaining undeveloped part of the site was bought in 1925 by the Wilmington Steamboat Company,[48] which conveyed it in 1927 to the Delaware—New Jersey Ferry Company.[49]

The ferry company conveyed the tract to the State of Delaware in 1952, after the Delaware Memorial Bridge made ferries here obsolete.[50] Certain lots in the southwest part of the property were conveyed by the state to the owners of adjoining lots on Second

43 New Castle County Deed Book G-5, Delaware Archives, page 464.

44 *Laws of Delaware*, volume 10, chapter DXLVI, February 21, 1851, manuscript, Delaware Archives.

45 New Castle Deed Book D-10, page 55, Delaware Archives.

46 New Castle Deed Book B-11, page 174, Delaware Archives.

47 New Castle Deed Book N-14, page 15, Delaware Archives.

48 New Castle Deed Book L-33, page 508, Delaware Archives.

49 New Castle Deed Book Z-34, page 162, Delaware Archives.

50 New Castle Deed Book Z-51, page 466, Delaware Archives.

Street.[51] In 1966 the State of Delaware conveyed the remainder to the Trustees of the New Castle Commons.[52]

51 New Castle Deed Book I-54, pages 195, 196, 198, and 200, Delaware Archives.

52 New Castle Deed Book I-78, page 199, Delaware Archives.

EXCAVATION NARRATIVE

Field method and research design

Each archæological project requires its own strategy, depending upon its objectives, its funding level, and the eventual fate of the site. In the case of Fort Casimir, the objectives were limited to locating intact remains of the fort. Funding was appropriate for only limited testing. Since the site is in no danger of being destroyed, there was no need to salvage large quantities of artifacts. At the outset, it was resolved that complex features, if found, would be left unexcavated, so that a better-equipped future project might recover them properly.

The project area was laid out in a grid of ten-foot squares, with the beginning point of the numbering system far out in the river. There can never be a negative unit number in the site grid, so long as all excavation is on dry land. Each square was identified by a letter denoting the east-west ranks and a number denoting the number of feet from the imaginary offshore beginning point. Thus a unit called K-320 is in the eleventh rank west and lies 320 feet south of the beginning point.

In order to ensure that the grid would be recoverable, a base line was established along the east line of the alley that borders the site. A property corner was chosen as the beginning point for laying out the ten-foot squares. A nail, marked "zero" on the map, was sunk in the ground 100 feet from this property corner. Compass directions given in this narrative are according to grid orientation, which is the orientation of New Castle's street system.

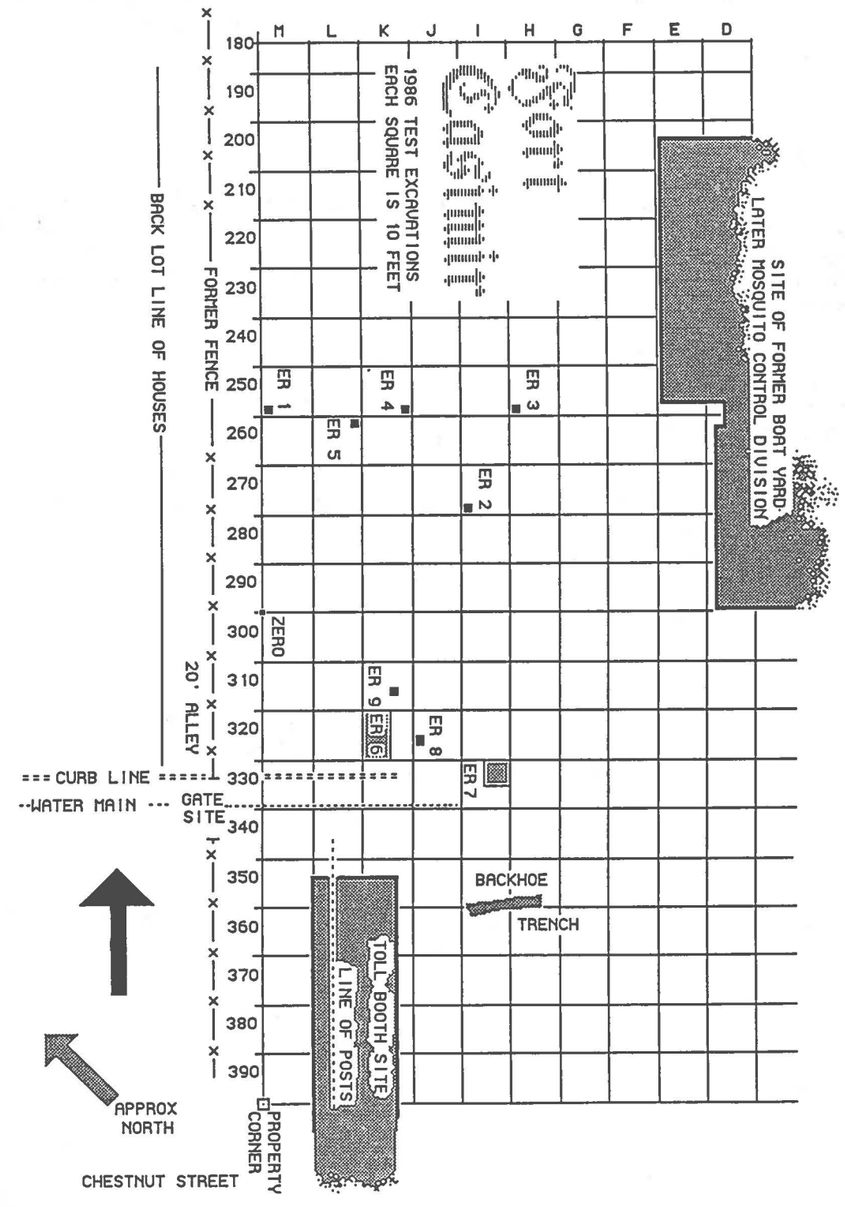
Measurements were kept in the English system, feet and inches; because property records kept in feet and inches are an integral part of the research, the investigators felt that introduction of totally metric measurements would unnecessarily confuse the report.

Excavation began with post holes placed along the grid. Post holes often are used at the first step in an excavation because they quickly provide a general overview of the buried soil horizons. Moreover, a post hole does little damage if it strikes a valuable buried feature. All the post hole locations were recorded, so that they can be identified by future archæologists.

Once the investigators had identified the location of buried seventeenth-century remains, a unit five feet square was opened; a second unit the same size was eventually opened next to it. This size unit was chosen because it is large enough to provide a view of the buried features, but does not destroy a large area. Test pits are, by nature, not as precise as formal excavations; data that is lost during the relatively crude procedures of test pitting would have been recovered in a formal excavation. In the presence of extremely valuable and fragile resources, an archæologist conducting a test is well advised to keep his holes small and few. For this reason, too, the test units were not always carried to natural soil.

FIGURE 13

General plan of the project area



Because the postholes had revealed that much of the site was covered with a deep layer of ash, a backhoe was used to cut a trench into the fill in an effort to obtain some notion of its depth, extent, and composition.The mission of the backhoe was limited: to remove a large overburden of ash that covers the ancient foreshore or beach. It was kept well away from the known shoreline features and out of the underlying natural sand.

Because of the intense heat, the authors worked only in the mornings, beginning at about 7:30 and ending at noontime. Two archæologists, assisted by a local volunteer, carried out the survey work.

The tests

Fieldwork began July 16, 1986 with grid-setting and post-holing. Post hole testing was confined to a space about two feet square located in the corner of a ten-foot square, as indicated in the plan, figure 13. In each unit, the surface layer was dug away with a shovel. Because of the drought, the top foot or so of each test required pick-and-shovel work before the post hole auger could get a grip.

The first post hole, labelled ER (Excavation Register) 1, was set on line 140 feet north of the property corner monument. The top foot was clearly of recent origin, containing coal and modern trash. Below these layers, the soil appeared to be natural in origin to 39" deep, where digging stopped.

This unit was interpreted as natural soil, from which any surviving early levels have been graded away. In order to identify any areas where early layers might be found, the archæologists decided to systematically explore along the grid to identify the site's principal microgeographical zones.

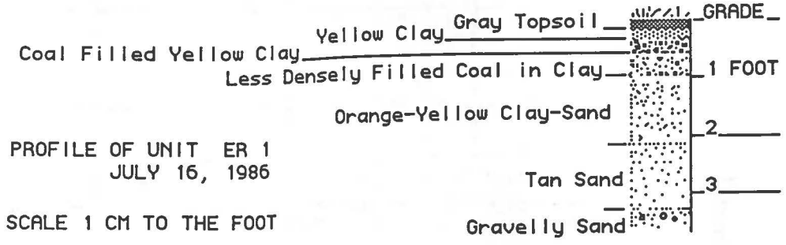


FIGURE 14

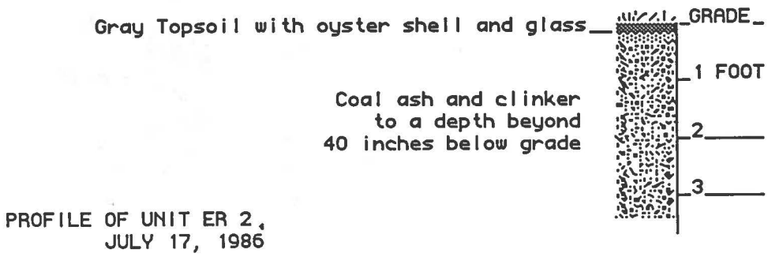


FIGURE 15

ER 2 was opened 40 feet eastward and 20 feet south. There was a thin layer of topsoil, below which was a mass of homogenous slag, clinker, and ash to a depth of at least 40 inches. This deposit was clearly of industrial origin, since it must represent a very large mass of identical material. The next test, ER 3, was opened to the east, to determine that the ashy fill was in fact a uniform layer. ER 3 was capped by five inches of bright yellow clay fill, apparently a recent deposit. Below this was a layer of bricks, trash, and ash in lenses, representing occasional casual deposits of inert refuse fill. From there to a depth of 42 inches, the fill was coal ash, clinkers, and foundry slag with no distinguishable differences in texture, color, or content from top to bottom. At the bottom of this fill, the post holer brought up smooth brown sand that appeared to be natural.

The fourth test was positioned midway between ER 3 and ER 1, in an attempt to seek the edge of the natural riverbank. ER 4 proved to be similar to ER 2 and ER 3. Below a mixed and lensed topsoil layer was a uniform deposit of powdery black coal ash.

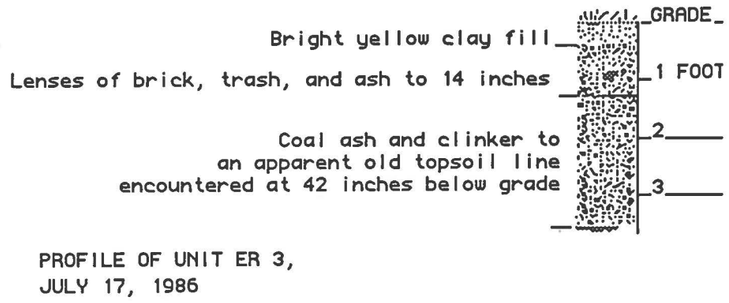
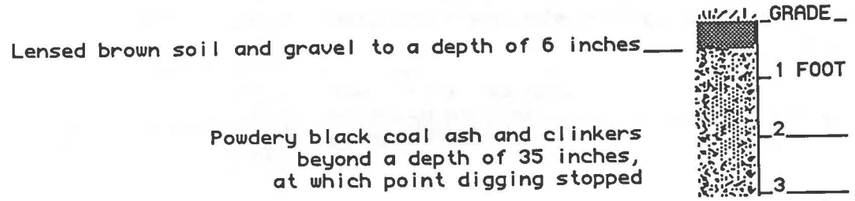


FIGURE 16



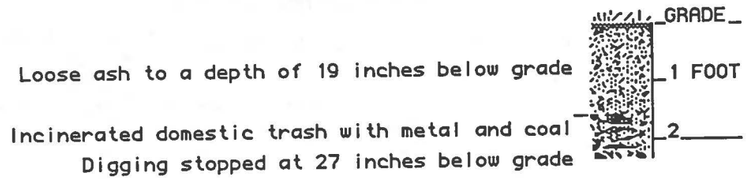
PROFILE OF UNIT ER 4,
JULY 17, 1986

FIGURE 17

ER 5, ten feet closer to the base line, proved to be different. To a depth of 19 inches, this test contained the same sort of industrial ash as the units to the east. At that point, the nature of the fill changed. It was full of domestic trash, including parts of a gas range, that had been incinerated. This incinerated trash was so tightly compacted that digging stopped at 27 inches below the surface.

This series of five tests had demonstrated that a bank lay somewhere in the vicinity of the Trusteees' property line along the alley. To the east was a deep artificial fill, and to the west was natural ground upon which archæological remains might be found. The archæologists then decided to attempt to find a similar profile elsewhere on the site, in order to define the course of the bank. Another cluster of tests, about sixty feet to the south, was decided upon.

ER 6 was opened twenty feet to the east of the base line, near the former curb line of the ferry approach road The topsoil here was six inches thick, with ash, trash, and old pavement materials. Below that deposit was smooth clay to a depth of 21 inches, where a piece of yellow "Dutch" brick came up in the auger bucket. At bottom of the hole, a piece of blue-decorated tin-enamelled earthenware could be seen. Post holing was immediately stopped, and the unit was reserved for the more precise techniques of a test square.



PROFILE OF UNIT ER 5,
JULY 17, 1986

SCALE 1 CM TO THE FOOT

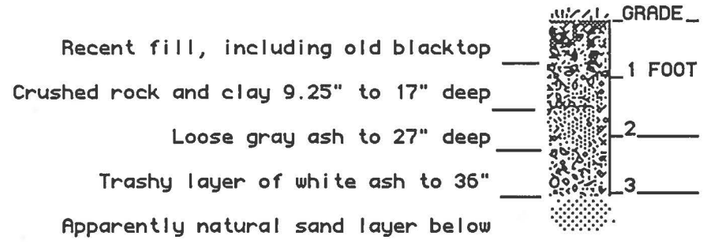
FIGURE 18

On June 18, the crew tried all morning to open this ten-foot square, but the soil was too hard for the kind of careful digging that its apparent contents would require. The top layer of trashy fill was removed from the entire unit and the northwest quarter was opened into the firmer topsoil that lay below. This clay bed obviously had been pounded into a solid adobe-like mass by years of traffic; when cut, it broke loose in thin laminates that resembled nothing so much as Delaware beaten biscuits, which are said in the local folklore to be the second hardest material, after diamonds.

Over the weekend, a heavy rain filled this unit with water; the excavators decided to allow the water to percolate in and soften the soil. On Monday, July 21, a tent was erected over the unit to keep it [and the archæologists] from sun-drying. Other units were explored while the rainwater softened ER 6.

In order to continue looking for the inshore edge of the ashy fill, a unit was opened twenty feet to the east, labelled ER 7. The entire surface of a five-foot square was opened in the northeast quarter of this unit. It was shovelled to a depth of 17 inches. The topmost layer contained clay, rock, and recent trash overlying a gray ashy layer. From 9.25 to 17 inches, large crushed rock made up most of the fill. At 17 inches, the ashy layer was encountered and the post hole digger was employed. Loose gray ash was found to a depth of 27 inches. At this point, the fill became trashy, with white ash and pieces of domestic trash, which extended to 36 inches, where apparently natural sand was encountered.

A post hole, ER 8, was sunk into the square between ER 6 and ER 7, in search of the edge of the bank. To a depth of eight inches, the fill consisted of ash, clay, and chunks of pavement. Below that level, to a depth of 30 inches, the fill consisted of lenses of coal ash and clay with Victorian-era domestic trash. This stratum rested upon fine sand, which was tested to a depth of 42 inches below grade.



PROFILE OF UNIT ER 7,
JULY 21, 1986

SCALE 1 CM TO THE FOOT

FIGURE 19

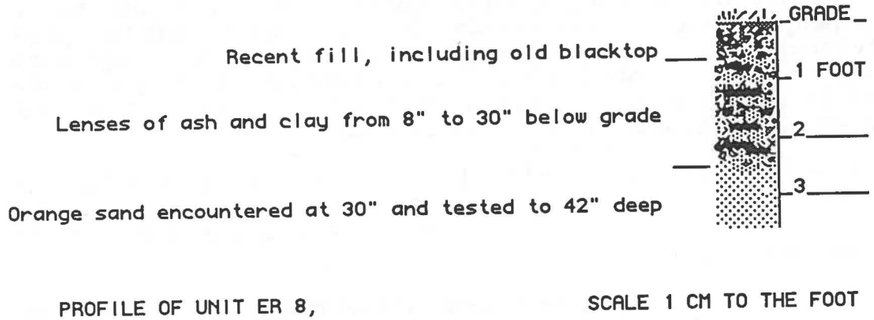


FIGURE 20

Finally a post hole was sunk into the unit immediately north of ER 6 and labelled ER 9. After the trashy topmost layer, the fill consisted of smooth brown clay loam to a depth of 15 inches. From 15 inches to 42 inches, the fill was smooth orange sandy clay. At 42 inches, pebbly sand was encountered, reminiscent of the apparently natural layer at a similar depth in ER1.

On the morning of July 22, ER 6 was dry enough to work. After accumulated surface mud was removed, it was possible to dig the softened clay beneath. The next five field days were devoted to studying this small unit. The northwest quadrant, to the left in Figure 21, was the first to be opened. The same trash-filled, ashy top level with clods of yellow clay was found here as elsewhere in the site. At a depth of no more than four inches, this gave way to a layer of loam with clods of yellow clay, which was designated ER 6A. In the southwest corner of the quadrant, yellow soil that appeared to be undisturbed subsoil was soon apparent. This proved to be the case. ER 6A was carefully shovelled and artifacts were recovered from it. Flecks of red and yellow brick and charcoal were found throughout this deposit.

At the bottom of the mixed material, a layer of uniformly light brown clay soil appeared, and was labelled ER 6B. Three postholes with postmolds were observed; they are identified by crosses in the plan below. These molds contained no artifacts and were wholly within this deposit.

ER 6B was trowelled to its bottom. It was found to contain a pile of mixed cobbles and yellow bricks, which appeared to be resting on a lower stratum. Tobacco-pipe stems, pieces of roofing tile, majolica, glass, and red earthenware were found in this deposit.. The artifacts were widely scattered, although most lay near the bottom, at about 20 to 22 inches below the surface. Two sherds (one of which had been hit by the post hole test) were from the same Dutch majolica plate. The positions of the artifacts conveyed the impression that they were a secondary scattering of artifacts that had orginally been deposited elsewhere.

As ER 6B was removed, it became apparent that it was the fill of a ditch or depression that had been cut into a pre-existing layer of disturbed soil. Up the slope and across the bottom of the unit was a layer of mottled gray and yellow soil, ER 6D, that was tested only an inch or so into its top. Along the north wall was a darker rectangular feature sealed by ER 6B that was not explored. The smooth texture of ER 6B pointed to a water-

deposited soil, whereas the materials above and below appeared to have been shovelled or plowed.

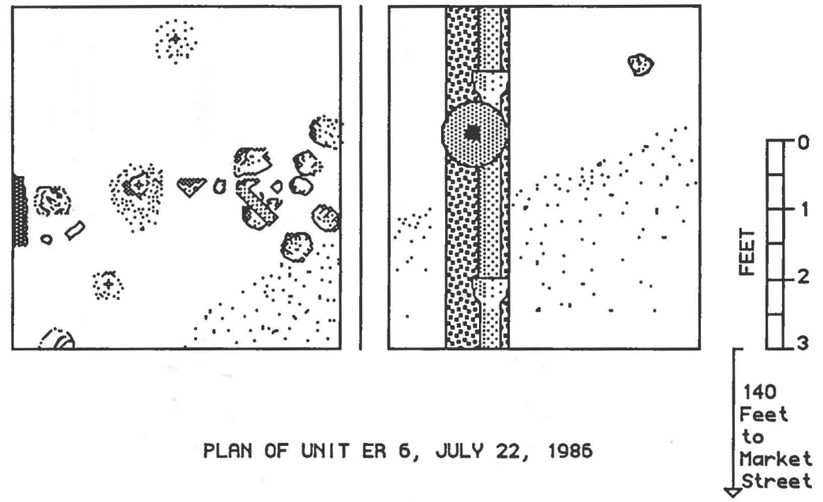


FIGURE 21

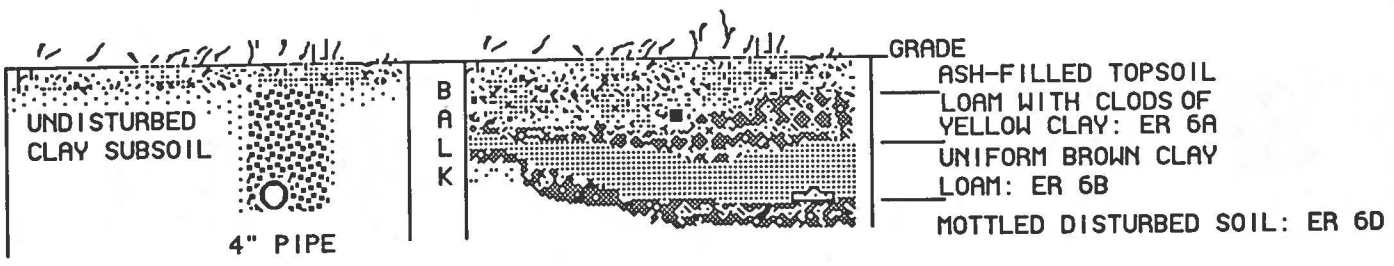
The southwest five-foot square in the unit was opened, in an effort to see if the feature was in fact a ditch, and if its course could be discerned. A balk was left between the two units. As the topsoil was being removed, yellow clay subsoil appeared on the surface at the west side of the unit. It later proved to be the edge of the same ditch feature that had been observed in the earlier unit.

A ditch, exactly parallel to the sides of the unit, ran east-west across it; this turned out to be a terra-cotta domestic sewer line. The sewer line had been penetrated by a post hole which still contained the concrete that had been poured in to secure a round steel post. These disturbances reduced the area available for investigation. When the sides of the utility ditch were being cleared, the profile of the original subsoil line became apparent.Rather than a gentle slope, the subsoil could be seen to be sharply cut. ER 6A, the mottled yellow and brown fill layer, appeared only in the east side of the unit, overlying another mottled layer. Resting on the subsoil bank was a deposit of mottled gray and yellow soil, designated ER 6C, in a depression that apparently had been cut into both the bank and the underlying ER 6B deposit. In the original unit, this deposit had probably gone unnoticed, lumped into the similar ER 6A deposit above.

The uniform brown soil of ER 6B was present in this unit, but here it was observed to divide into two levels. At a depth of about 20 inches there appeared to be a break, resembling an old surface on which artifacts were scattered. These artifacts and the underlying soil were labelled ER 6E.

Underlying all of these units was a layer of gray and yellow soil with much wood ash, which was designated ER 6F, and appears to be identical with ER 6D in the other sub-unit. Neither stratum was tested for depth or content, since it was obvious that they are

sealed seventeenth-century strata that should be removed only as part of a more sophisticated archæological intepretive project.



WEST (STREET) PROFILE OF ER 6 WITH ADJACENT PLAN

FIGURE 22

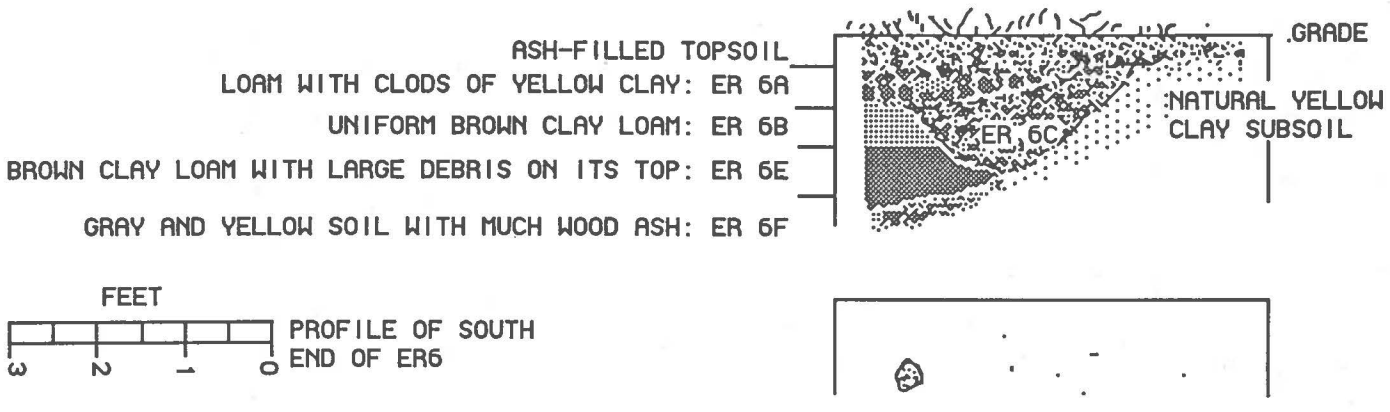


FIGURE 23

Because the weather was threatening to become unsettled, the archæologists decided at the last minute to work on Saturday, July 26, completing the excavation just as a large thunderstorm struck. During a few minutes, the two squares filled to within three inches of the surface. The local volunteer firemen were recruited to pump out the holes on Sunday, but all the water was gone by the time they arrived. The old sewer line evidently was still open enough to carry away the rainwater. By Monday, July 28, the hole was dry enough to let the archæologists take a few last measurements before backfilling. Modern trash was left at the bottom of the excavation as a signal to future workers.

Also during the morning of July 28, a backhoe was used to cut a trench in the ash-filled area to the southeast of the other tests. The purpose of this test was to ascertain the nature and depth of the fill, and to determine if there is a possibility of buried cultural layers below it. The backhoe cut five feet into the soil beneath the old ferry landing road. The gray ashy material was found there in a deposit from two to three feet thick. Close to the shore, the lowest cultural layer was loose domestic ash with incinerated trash. This incinerated trash layer became thicker on its west (inland) end. At the bottom, about five feet below grade, was a layer of clean loose gray sand, about six inches thick, under which was hard sand of the same color with cobbles. No cultural materials were found below these ash layers, but buried cultural layers could exist below the beach sand at the bottom.

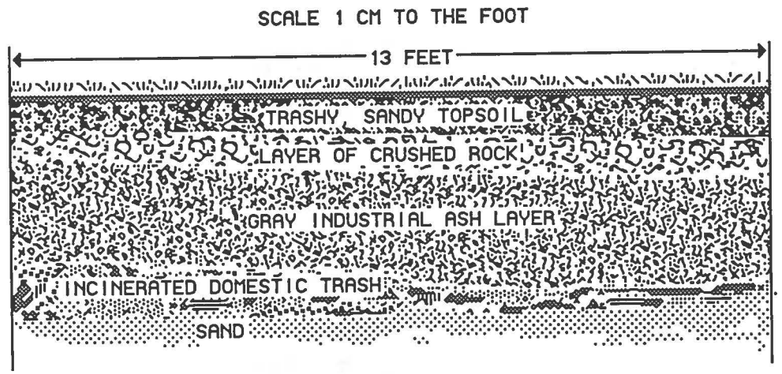


FIGURE 24

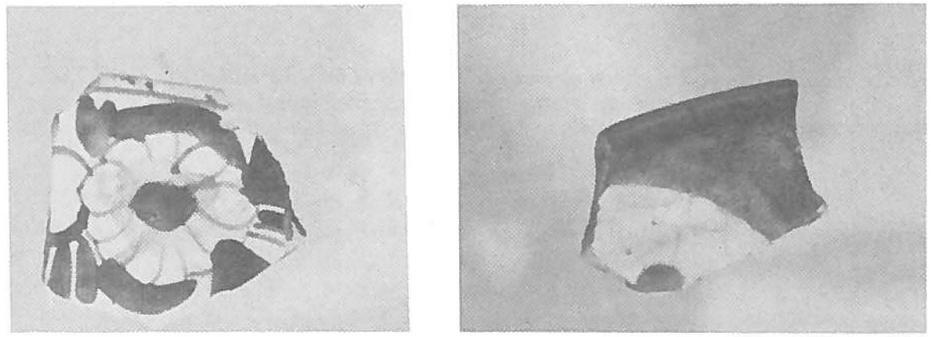


FIGURE 25

Two pieces of Dutch majolica from ER 6 B, actual size: On the left is a rimsherd of a porringer similar to Korf figure 688. On the right is a rimsherd with Wan-Li decoration, possibly part of the larger plate, illustrated below.

DISCUSSION OF THE ARTIFACTS

When the project began, the investigators were looking for certain classes of artifacts that could be closely associated with Fort Casimir. From the documentation, it is known that bricks and roofing tiles were brought from Fort Orange; authentic Fort Casimir bricks and tiles should match specimens found in the Albany area. Other indicators would be Dutch fine ceramics and utilitarian wares. White clay tobacco pipes are another class of well-documented ceramic artifacts that can be statistically dated by bore diameters. Quite by chance, the test pit in ER 6 yielded all the necessary indicators.

Representative artifacts from ER 6 were taken to Albany, New York, on September 4 for examination by Charlotte Wilcoxen of the Albany Institute of History and Art, the principal authority on Dutch majolica in the New World, and by Paul Huey of the New York State Bureau of Historic Sites, who excavated Fort Orange. They confirmed the authors' belief that the sample from ER 6 is indeed a closed Dutch context of the middle seventeenth century.

Dutch majolica

Parts of at least two Dutch majolica decorative vessels were found in the test. In fact, it was the sight of one sherd at the bottom of the post hole in ER 6 that induced the archæologists to dig the test unit there. Some damage from the auger was noted.

Tin-enamelled earthenware, collectively known today as "delft," is actually a complex of similar ware types under such names as majolica, faience, and galley pots. While the tin enamelling technique was known in antiquity, its manufacture did not find its way into the potteries of northern Europe until the eve of the Rennaissance.

FIGURE 26

Face of a Dutch majolica platter or charger, with Wan-Li border and a fruit motif. The break passes through a hanging hole in the footring. Actual size.

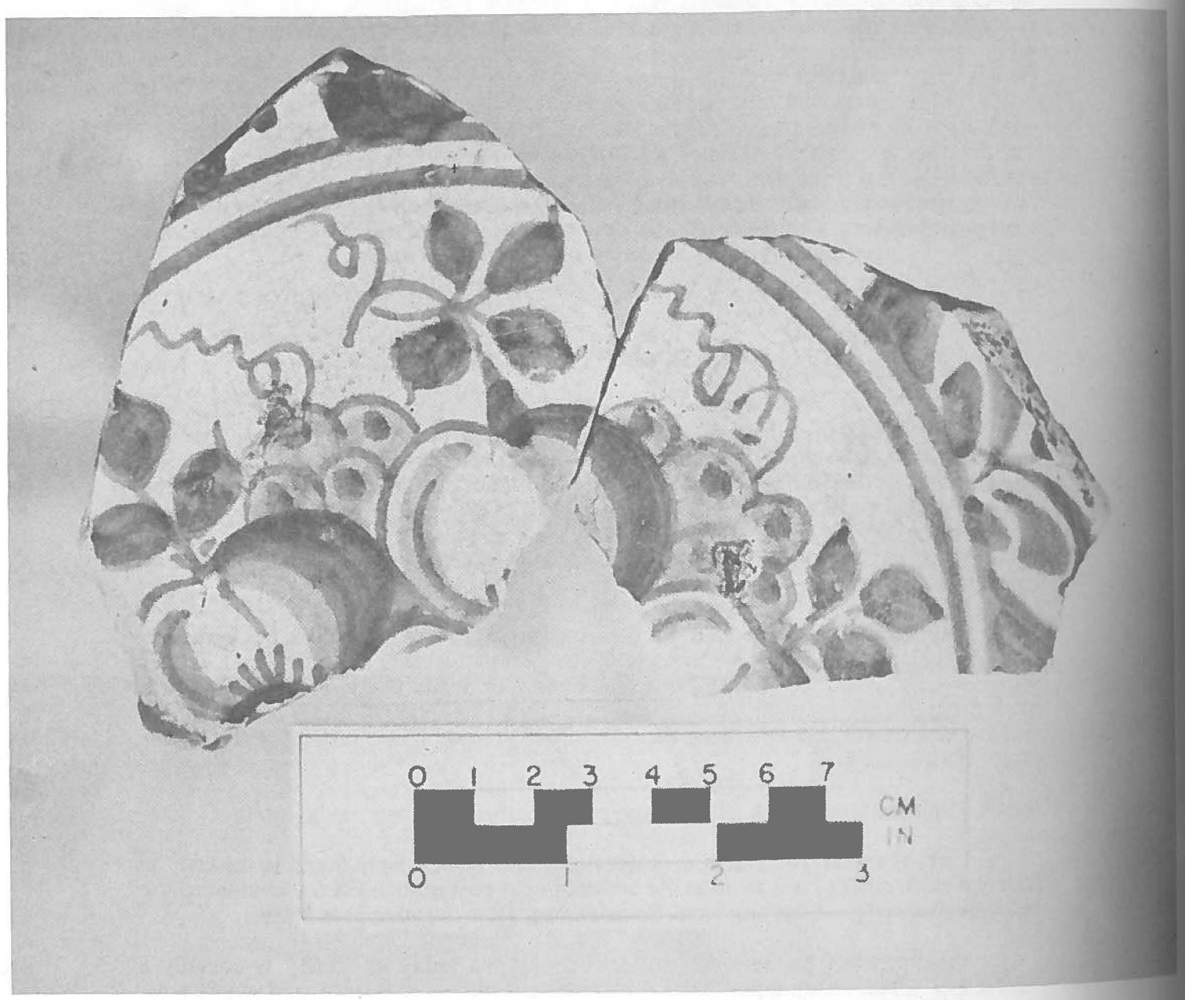
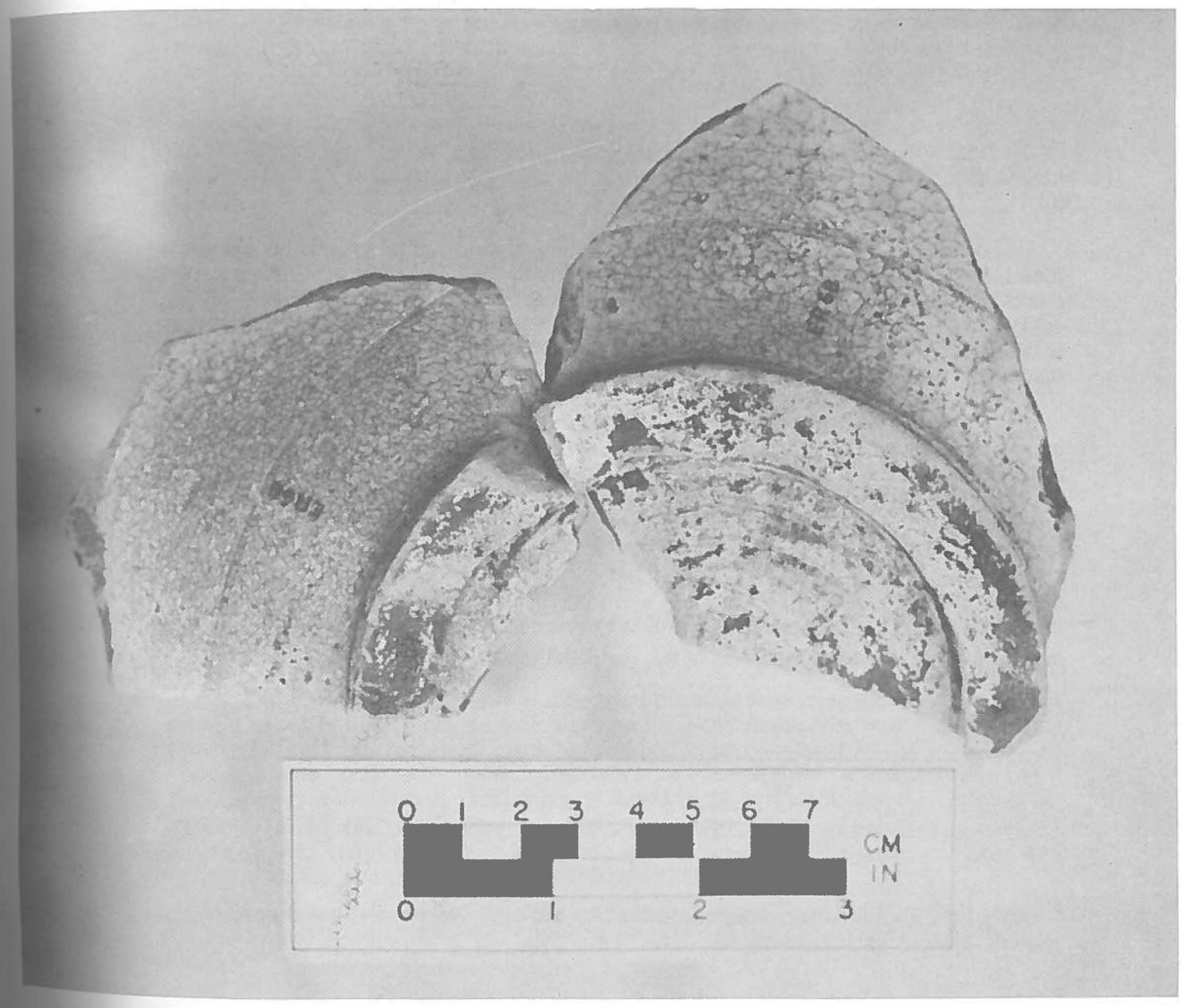


FIGURE 27

Reverse side of the Dutch majolica platter or charger. This side is dark cream-colored, being a clear glaze over the yellow body. The Wan-Li rimsherd (figure 25) may have come from this piece.



During the reign of the Wan-Li emperor (1573-1619), rich blue-on-white porcelain was imported from China by merchants of the newly-independent Netherlands. The earliest Dutch traders, who first travelled to China in 1596, came upon porcelain "more exquisite than crystal." It was imported in quantity in 1602, and immediately caused a sensation.[1]

While earthenware never can duplicate the lustre of porcelain, tin-glazed earthenware decorated with Chinese motifs proved to be popular and cheap substitutes for the expensive imports. Makers of tin-enamelled earthenware copied the Chinese rim designs, which are known collectively by the name of Wan-Li.[2] One authority on Dutch majolica states that Wan-Li rims are found on majolica copies made in the Netherlands between 1625 and 1650.[3]

The majolica specimens found in ER 6 were typical of the ware, with tin enamelling on the front only and a lead glaze on the back. Such one-sided materials are called "Dutch majolica" to distinguish it from the "delft," fully covered with tin enamel, which supplanted it.

A charger, or platter, of Dutch majolica was the largest tin-enamelled specimen found. It was originally ten to twelve inches in diameter. The plate was found in two pieces, lying on the bottom of the deposit ER 6B. The yellow body is between .6 and .9 cm thick and 2.7 cm thick through the footring. It was originally equipped with a hanging hole through the footring, for such dishes were intended to be displayed on the wall rather than on the table.

Parts of a Wan-Li border can be seen on this piece. A separate sherd, which may be part of this same piece, contains a Wan-Li rim fragment (Figure 35). The principal motif of this piece is an arrangement of fruits. Mrs. Wilcoxen showed the authors a similar specimen, probably a kiln waster, that she had obtained from the Netherlands. The same motif, executed by a different hand, is illustrated in the standard work on Dutch majolica, by Dingeman Korf, and dated 1625-1675.[4] Korf's specimen, however, did not have its border; Wan-Li borders generally tend to belong to the second quarter of the seventeenth century. A second Dutch majolica piece was a porringer with a flowered rim (Figure 25), similar to one Korf illustrates and attributes to Friesland in the middle of the seventeenth century.[5] Only a rimsherd survives of this particular piece.

1 C. H. de Jonge, *Delft Ceramics* (New York 1969), page17.

2 Ivor Noël Hume, *A Guide to Artifacts of Colonial America* (New York 1970), pages 257-265.

3 Letter from Paul R. Huey, Senior Scientist (Archeology), New York State Bureau of Historic Sites, August 7, 1986.

4 Dingeman Korf, *Nederlandse Majolica* (Haarlem 1981), figure 713.

5 *Ibid.*, figure 688.

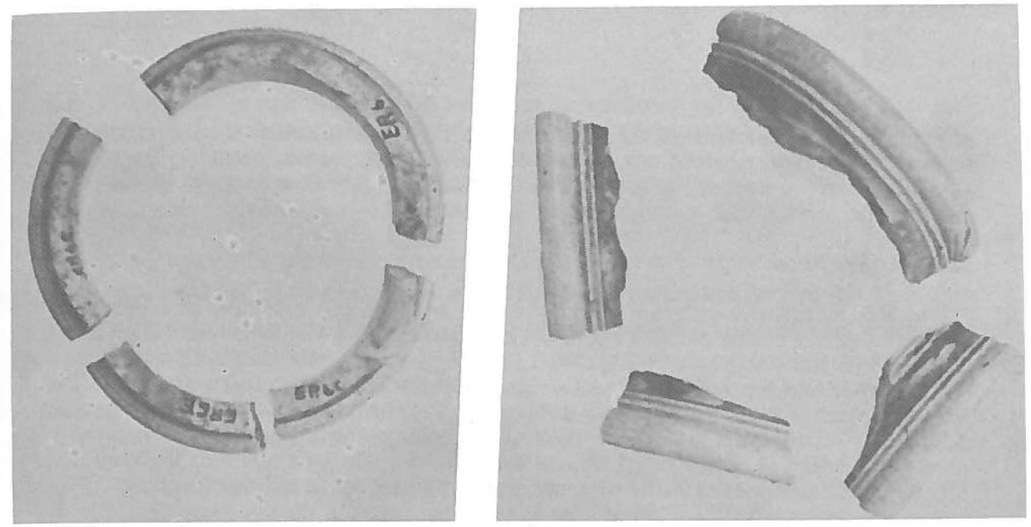


FIGURE 28

Two views of the grey Rhenish stoneware vessel lip, before reconstruction. The piece was found in four parts, in three different deposits. On the left is the view from below; on the right are the four parts in the same relative postion, with the exterior decoration facing the camera. Actual size.

Grey rhenish stoneware

Grey saltlaze stoneware vessels were commonly used during the seventeenth century to serve and store beverages. During the earlier periods, the grey stoneware body was covered with brown iron-oxide glaze that often was spotted or mottled. By the middle of the seventeenth century, brown decoration had almost wholly given way to gray with blue decoration. Grey ware is first documented at the Grenzhausen and Höhr potteries in 1614.[6] The oldest dated example, 1632, found in an American context, was discovered by the authors at the Hallowes Site in Virginia.[7]

The one specimen of grey stoneware, illustrated here, was the neck of a jug or ewer. The top is flat, 6 cm. outside diameter, 4.3 cm. inside diameter. The edges are sharply defined and the glaze exhibits the same creamy color that characterized the Hallowes Site medallion. Such jugs often had metal lids, which are shown in contemporary paintings. A similar jug is found in two paintings by the Dutch artist Nicholas Maes dated 1655 and 1656.[8] Another appears in the De Hooch (1629 - c. 1683) paintings of "a Dutch courtyard" in the Mellon Collection and "Woman and child in a courtyard" in the Widener Collection at the National Gallery.

6 Gérard Gusset, *Stoneware: White Salt-Glazed, Rhenish and Dry Body* (Ottawa 1980), pages 149 and 157.

7 Ivor Noël Hume, *A Guide to Artifacts of Colonial America* (New York 1970), page 281; Ivor Noël Hume, *All the Best Rubbish* (New York 1974), pages 108-109.

8 Ivor Noël Hume, *Martin's Hundred* (New York 1982), pages 92-93.

Such early examples as the specimen from Fort Casimir could be quite refined and delicate. Like every stylish pottery, this ware soon became commonplace. Grey stonewares of the Westerwald were used for another century in such mundane forms as tavern mugs and chamberpots embellished with British royal cyphers.

Red earthenware

Red earthenwares are especially tricky to date and attribute to a particular nationality. An archæologist in Virginia excavated a vessel for which he found many exact parallels in Dutch paintings of the period. In spite of the fact that virtually identical vessels were found in Dutch paintings and on Dutch sites, he attributed the vessel to an unidentified Virginia potter. Nationality was a particularly slippery concept on the seventeenth-century Atlantic seaboard. Isaac Allerton, who originally emigrated to Massachussetts, lived in New Amsterdam, in New Amstel, and on the Potomac. While he was identified with the Dutch, he sold ceramics to the Swedes and his son was a Virginia militia officer.

In the lower part of the feature, ER 6F, was a sherd of a small red earthenware dish, only .3 cm. thick at its thinnest. It has a clear interior lead glaze that imparts an overall burnt-orange color to the vessel. Dark pinhead flecks of impurities add dark-brown dots to the interior. When this sherd was shown to a Virginian archæologist, it was identified as local ware. New York archæologists identified it equally positively as Dutch. Such red earthenware dishes were ubiquitous in the colonies, but their origin has never been determined. Traders like Allerton probably saw to their wide distribution among both the white and Indian populations.

Another piece, with a similar clear glaze, is more clearly of Dutch origin. It is from an open pot or storage jar with a string rim applied to the exterior, with interior and exterior glaze. There were also slip-decorated wares and one sherd of a hard-fired earthenware with a luminous dark brown glaze that is common on later Delaware Valley pottery.

Bricks and tiles

Bricks and related products, including tiles and pavers, are the commonest ceramics in historical archæological sites. In this project, some standard, modern, red bricks were found in disturbed contexts and discarded without comment. Yellow "Dutch" bricks are commonly found in Swedish and English sites of the early seventeenth century, as well as on Dutch sites. In the town of New Castle, they often are found during construction work. Fort Casimir was supplied during its first years with brick from Albany. Up the Delaware River, on Tinicum Island, similar hard, yellow bricks have been found at the site of the Swedish governor's mansion, Prinzhof.[9] The Prinzhof bricks are complete, so that length can be determined. In width and height, they match the Fort Casimir specimens.

In spite of their common designation as "Dutch," small yellow bricks are too common throughout the Colonial seaboard to sustain a national attribution without further documentation. As with pottery, the sparseness of settlement and vigorous intercolonial trade tended to blur ethnic and national distinctions in the material culture. On the Potomac

[9] Marshall Becker, "'Swedish' colonial yellow bricks: notes on their uses and possible origins in 17th Century America," *Historical Archaeology* , volume 11 (1977), pages 112-118.

River in Virginia the authors excavated a chimney foundation at the Hallowes Site that was built of such bricks. A few miles away, similar bricks were found in the John Washington house site.[10] Unlike the Fort Casimir bricks, however, the Virginia yellow bricks were yellow and soft, sandy and poorly fired. These small yellow bricks were not locally made; when they were analysed chemically, local clays were ruled out as their source.

At Jamestown, yellow bricks were used in the cellar steps at the so-called first state house building. Noël Hume notes that Virginia specimens average about $7\frac{1}{8}$" by $3\frac{3}{4}$" by $1\frac{3}{8}$" and vary considerably in size.[11] In Jamestown, where brickmaking was practiced early in the seventeenth century, archæologists have found square red pavers and curved roofing pantiles, both of which have parallels at Fort Casimir and at Fort Orange.[12] Pantiles found in ER 6B were identified by Paul Huey as being similar to the ones he found in Fort Orange, but he is not certain where they were made.

During the second half of the seventeenth century, small yellow Dutch bricks were shipped to England as ballast, where they may be seen in walls or as pavement near ports in East Anglia and Kent.[13]

The red paving brick fragments found in the Fort Casimir excavation were incomplete, but it is possible to state that they were at least 5 cm. high and more than 11 cm. in each direction on the surface. Such brick pavers would commonly be found in courtyards and inside public buildings. Square red pavers were used on the floor of the second church in Elizabeth City Parish, Virginia of 1623.[14]

Other artifacts

Fragments of bottle glass included pale olive vessel glass fragments, the bottom of a green case bottle, and part of a round blue-black free-blown bottle. There was also some window glass, which was very thin and pale green.

White clay pipestems, a sensitive date indicator, were represented by only three fragments. The bore diameters of these stems are consistent with the fort's period of occupation. From larger collections, it is often possible to precisely date collections by the pipestems they contain.

[10] Edward F. Heite and William T. Buchanan, Jr., "The Hallowes Site: a seventeenth-century yeoman's cottage in Virginia," *Historical Archæology*, volume 5 (1971), pages 38-48.

[11] Ivor Noël Hume, *A guide to artifacts of Colonial America* (New York, 1969), page 83.

[12] John L. Cotter, *Archeological Excavations at Jamestown, Colonial National Historical Park and Jamestown National Historic Site, Virginia* (Washington 1958), page 171.

[13] Ronald Brunskill and Alec Clifton-Taylor, *English Brickwork* (London 1977), page 80.

[14] Eleanor Sayer Holt, *The Second Church of Elizabeth City Parish 1623/4 - 1698: An historical-archæological report* (Richmond 1985), pages 82-83.

Iron included a piece of a saw blade, a cluster of small nails that may have been in a shoe heel, and several loose nails.

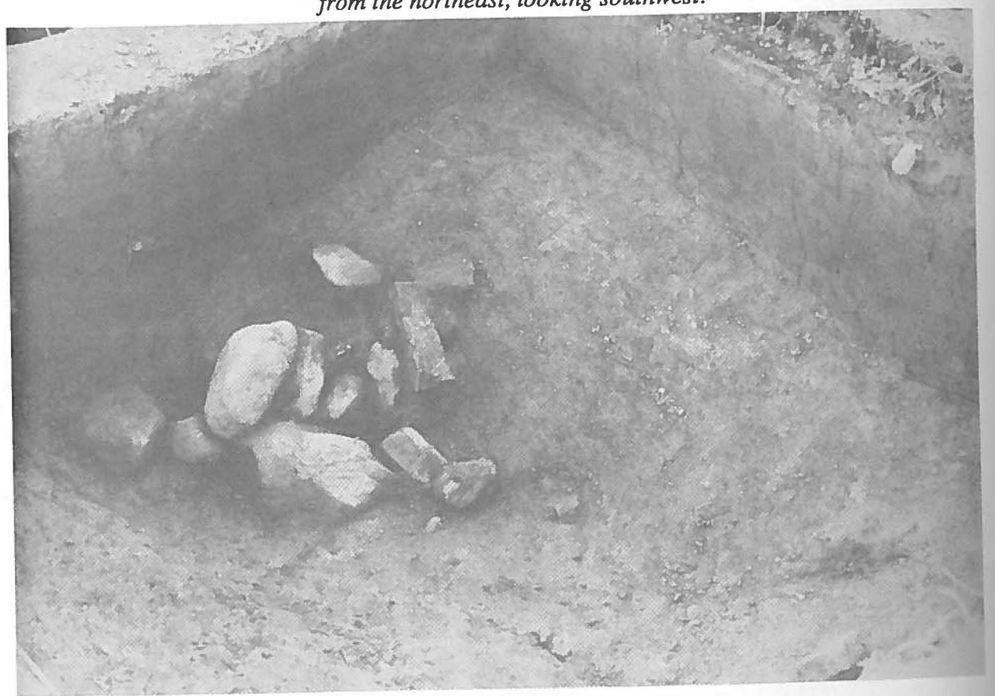
A pile of cobbles and bricks at the bottom of ER 6B was apparently deposited in the bottom of the ditch soon after it was opened. The pile lay on the same surface with the two parts of the majolica plate and some scattered bricks. The smooth gray clayey soil of ER 6B apparently washed into the ditch and covered these artifacts. Although no mortar was adhering to them, the bricks and cobbles appeared to have been demolition debris from a structure. Huey reports cobblestone paving in the bottom of the ditch at Fort Orange, but no such feature was found in this test.

Conclusions

The artifact evidence is consistent with a mid-seventeenth-century feature. All the materials in ER 6B and below were apparently deposited there during the seventeenth century. This was not a trash pit, but probably was a trench opened for some other purpose, into which trash was tipped. Based upon the artifact evidence, these materials could have been used at Fort Casimir.

FIGURE 29

Pile of rocks and bricks at the bottom of ER 6B, lying on the sloped bank of the ditch, from the northeast, looking southwest.



INTERPRETATION

Fort Casimir has been found. Some of it survives under the "Fort Lot" where Engelbert Lott was required to level it. Of the lot's location there has never been any doubt, and of the fort's appearance there was never any question. However, Bull Hill has changed considerably over the three centuries since the fort was demolished, to the point where the fort's location is not readily apparent in the topography.

Probable location of the fort

The features discovered in 1986 are certainly associated with the fort, but we cannot at this point know which part of the fort. The deposits appear to represent a trench with five distinct layers of fill. While the trench was open, a line of posts crossed it. Earlier, a hole had been sunk into the deepest layer of fill.

If this ditch was part of the shore defenses of Casimir, a significant part remains under the parking lot. We know that the fort stood on or near the present Second Street right-of-way because Engelbert Lott was required to leave space for the street when he cleared the lot. If the fort occupied most of Bull Hill, it is easy to see why the court required Lott to leave the space open for a street. By the same token, if the fort's walls had stood across the only access to the lots on the north end of town, their demolition would explain why these lots were taken up immediately after Lott's grant.

These elements combine to evoke a picture of a fort standing astride the narrow isthmus that connected Bull Hill to the hill on which the rest of the town stood. If the fort's walls were aligned to the river, it probably stood at an angle to the street, occupying most of the high ground that projected northward into the marsh.

Probable design of the fort

There is no reason to suppose that the fort differed radically from the Dutch forts at Albany, Manhattan, or Recife, Brazil. All were built by the same company under the same general orders, standing foursquare with earthen bastions on the corners. According to Lindeström, the river front of the fort was about 210 feet long, which is consistent with a breadth of 220 feet for the lot, or about 220 by 270 feet for the entire structure.

Fort Orange, at Albany, was somewhat smaller, by Huey's estimate.[1] He excavated a group of houses inside the fort and found that the outside of the square main part of the fort was about 160 feet across. The other Fort Orange, at Recife, Brazil, was built according to the same square plan in 1631 by Peter Van Buren for the Dutch West India Company. This fort is still standing.

The Swedish Fort Christina, later the Dutch Fort Altena, was also a square fort with pointed bastions; its original builder, Peter Minuit, had been a Dutch officer at Manhattan

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[1] Paul Huey, "Archæological excavations in the site of Fort Orange, a Dutch West India Company trading fort built in 1624", in "New Netherland Studies an inventory of current research and approaches," *Bulletin Knob, Tijdschrift van de Koninklijke Nederlandse Oudheidkundige Bond*, volume 84, numbers 2/3, June 1985.

when the fort there was built. If we are to believe the perspective of Dutch drawings of the fort at Manhattan, the earthworks of such forts must have stood well above a man's head, towering above any buildings around them.

Logs and upright palisades played an important part in the forts' structures, but we know that some structures were framed, since there is record of sill beams used in a guardhouse during the Swedish period.

Each fort had a gate and subterranean magazines or cellars. On the corner bastions were heavy platforms with sturdy foundations for the guns. In front of the fort itself were lesser trenches and walls, designed to make the approach to the fort as difficult as possible for foot soldiers. At Fort Casimir, the walls were never tested, since its conquerers commonly walked in through the open gate.

During the later Dutch period, Indians and Swedes were not given the run of the fort. Ships trading with the Indians were expected to do so on the beach below, which indicates that there may have been a commercial or trading area just south of the fort. This suppostion is supported by the fact that the next lot southward from the fort, Mr. Moll's, contained the old "magazine" or trader's storehouse.

Then, of course, there was the bath house, possibly a sauna, built by the Swedish commander. It may have been built in the low grounds on the landward side of Bull Hill, but we have no information except that it was "behind" the fort.

On the river side a pier provided access to the deeper water offshore. While pier pilings may exist, they probably are buried under the sand that is under three or four feet of industrial ash fill in the old ferry area. It is possible that the deep water at the mouth of the present town ditch was the anchorage of the fort, just as it provides a deep mooring today for private pleasure boats that are not much smaller than the Dutch transoceanic vessels.

Probable extent of remains

A person standing at the modern corner of Second and Chestnut must first realize that he is standing on five or six feet of fill. To the north, Second Street's present level is two or three feet below the original grade. A few feet east of the alley on the old ferry property is the edge of the old marsh that once bordered the river. South of Chestnut Street, the ferry company cut a sizable notch into the hill. The result of all this earthmoving is a relatively flat street. In a few places, the old topography can be seen. On Chestnut Street west of Second, some houses stand on the original grade, far below the present street level. On Second Street north of Chestnut, some private yards remain elevated at the original ground level, giving some idea of the hill on which Arnoldus de la Grange built his windmill.

While this earthmoving has certainly taken away some elements of the fort, it has also sealed other elements under deep layers of protective fill. Only more extensive archæology could delineate the areas where remains are present, and where they have been destroyed. Even where two or three feet of surface was cut away, the cellars of the fort buildings should have survived. Only deep modern cellars have certainly taken away all remains in their paths.

Statement of significance

Fort Casimir provided the Dutch with a symbolic military presence on the Delaware River, placed where it could fire a shot across the bow of an approaching merchantman, but not so well fortified that it might provoke combat with a warship. Sander Boyer and the other traders who built the fort were more interested in trade than in the territorial ambitions of European potentates. When the fort changed hands, they changed flags and kept on trading as before.

As they traded up and down the coast, the occupants of Fort Casimir slipped casually from one nation's colony to the next, gingerly avoiding customs collectors wherever possible. Augustine Herrmann, a resident of New Amsterdam and New Amstel who was originally from Prague, kept a manorial plantation in Maryland. His principal trade appears to have been the transshipment of Maryland tobacco across the peninsula to avoid English customs agents on the Chesapeake. Gerrit van Sweringen, the Dutch schout of New Castle, moved to Maryland and became a prominent citizen of Saint Mary's City. For such people, Fort Casimir was a trading post, a market town, a seaport, and a court in which to sue delinquent debtors.

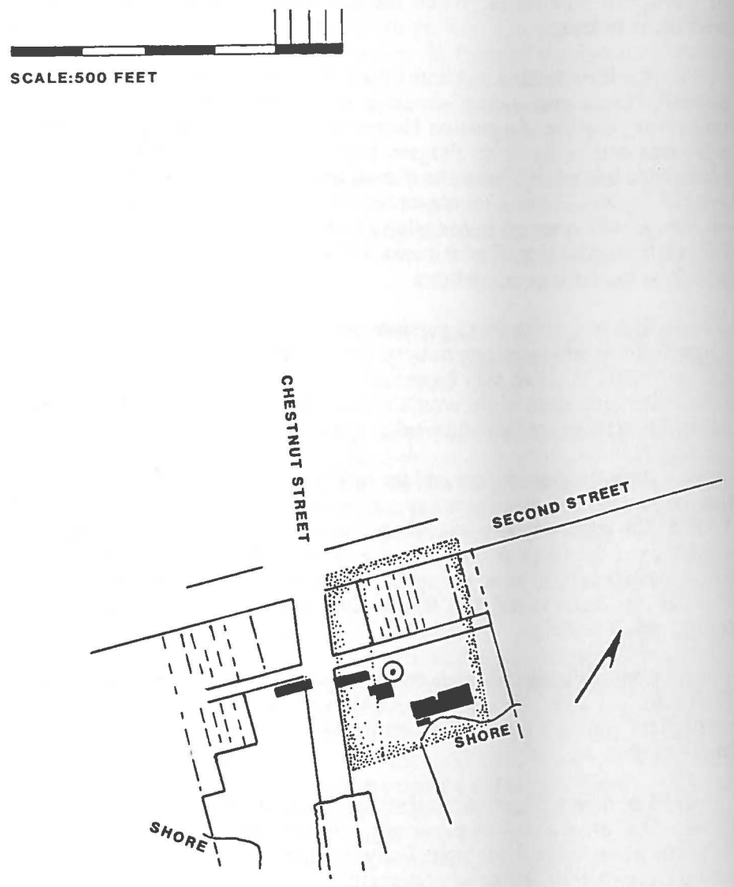
Militarily, the fort's garrison sometimes dwindled to one soldier, often the ancient Evert Brantie, who appears to have served there from its foundation to its abandonment. In times of tension, there may have been twenty regular soldiers in the garrison, but the militia reluctantly provided night watch duties on occasion. Munitions were ever a problem, and the little fort usually lacked powder, cannon, and small arms.

Both the documents and the artifacts suggest that life in and around the fort boasted the curious mix of dearth and luxury which are typical of frontier settlements in the New World. The relatively fragile and useless majolica charger was meant almost exclusively for display, yet the fort's occupants all complained that the buildings were ramshackle leaky affars desperately in need or repair. That is consistent with the Fort Orange findings, where Paul Huey discovered the finest European luxuries associated with fragile, almost temporary, buildings.

Casimir's significance in history rests upon its role as the center of trade on the Delaware, as the capital of the colony, and as the eastern terminus of the tobacco smugglers' portage across the peninsula from Maryland, upon which the Dutch tobacco industry rested.

The potential archæological significance of the site derives from the possibility that it contains large areas of relatively undisturbed seventeenth-century deposits. No such deposits have heretofore been found on the Delaware. This is the first Dutch site in the entire Delaware Valley to be systematically excavated and to yield artifacts in archæological contexts. It is so significant that it deserves to be set aside and preserved until the resources are available to exploit it fully and properly.

FIGURE 30
Comparison of the Lott tract and the land currently held by the Trustees



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ARTIFACT CATALOGUE

The artifacts from Fort Casimir site are segregated into two classes. The first class are sampled artifacts from the nineteenth-century test units. In the test units that yielded only relatively modern trash, the excavators kept only representative samples, such as marked or distinctive pottery, that might be used in dating the deposits. The other class, from ER6, represent an attempt at 100% recovery.

ER 1 : Artifacts found in the disturbed top foot of the unit

Clear enamelled soft drink bottle body sherd
Twisted handle fragment of refined white earthenware
Decorated milk glass

ER 2 : Coal ash and clinker

Oyster shell
Clear vessel glass

ER 3 : Deep ash deposit sealed by clay

Green and clear vessel glass
Refined white earthenware

ER 5 : Artifacts recovered from a layer of incinerated domestic trash at the bottom

Handle of a gas stove
Bottom of a moulded clear glass tumbler, "M" on the bottom
Neck of a crown-closure green beverage bottle, separate neck and lip molds
Pieces of glazed terra-cotta pipe
Underglaze printed refined white earthenware

ER 6 : Unstratified uppermost level, including recent blacktop debris.

Clear vessel glass, including a neck of a mold-blown bottle
Refined white earthenware, nineteenth or twentieth century

ER 6 : Unstratified, in the disturbed trench of a terra cotta sewer pipe

Base sherd, including footring, of a plain white delft plate
Refined white earthenware, two sherds, including one underglaze decorated polychrome
Red earthenware, interior clear glaze and slip, one sherd
Rimsherd of a refined gray stoneware vessel, 6 cm. outside diameter (cf. 6C & 6E)

ER 6A : Layer of loam and yellow clods

Fragments of yellow brick
Marbled yellow and red earthenware, no glaze surviving
Clear modern vessel glass
Sherd of white delft
Sherd of porcelain with modern halftone transfer print
Thick (1.1cm) sherd of dark blue-black vessel glass
Thin sherd of very old pale olive green flat vessel or window glass

ER 6B : Uniform brown clay loam fill containing a pile of cobbles and brick fragments

Four sherds, representing two or three vessels, Dutch majolica
Rimsherd of white delft
Fragments of pale olive green crown window glass
Sherd of pale olive green vessel glass
Iron nails
Basal sherd of a square green glass vessel with pontil scar adhering
Sherd-tempered and gravel-tempered red earthenware without glaze adhering
Red brick paver 5 cm. high, at least 11 cm. in both directions, mottled sandy paste
Rimsherd, clear-glazed red earthenware
Rimsherd, red earthenware with yellow glaze over dark gray body discoloration
Fragments of curved red tile
Stem fragments of white clay smoking pipe, 3 pieces: one $^{7}/_{64}$ and two $^{6}/_{64}$ inch bore
Section of saw blade with teeth
Hard red, thinly potted, earthenware handle with dark brown glaze inside and outside
Two body sherds of thinly potted reddish gray earthenware with clear yellow glaze
Red earthenware, washed white slip exterior, banded white slip inside, clear glaze
Yellow bricks, including measurable fragments:

Height	Width
3.5 cm.	8.5 cm.
3.6 cm.	8 cm.
3.8 cm.	—
3.7 cm.	—
3.8 cm.	—
3.4 cm	—
3.4 cm.	—

ER 6C : Lens of gray and yellow mottled soil in ditch line

One piece of sandy-surfaced orange brick
Rimsherd of a refined gray stoneware vessel, 6 cm. outside diameter (cf. 6 & 6E)

ER 6D : Mottled disturbed soil at the bottom of the feature, not fully excavated

One small sherd of Dutch majolica
One fragment of yellow brick

ER 6E : Brown clay loam underlying and separated from ER 6B by a trash concentration

Rimsherd of a refined gray stoneware vessel, 6 cm. outside diameter (cf. 6 & 6C)
Sherd of very pale olive green flat vessel or window glass
A cluster of nails that may be interpreted as a shoe heel or bag of nails
Yellow bricks, including measurable fragments:

Height	Width
3.6 cm.	—
3.6 cm.	—
3.4 cm.	8.5 cm.

ER 6F : Gray and yellow mottled soil with wood charcoal flecks

One sherd thinly-potted red earthenware with clear interior glaze

ER 7 : Deep slag and trash

Most of a blue-decorated gray stoneware cuspidor
Milk-glass vessel, probably an ointment jar
3 fluid ounce bottle impressed with "Glyco Thymoline"
Black hard rubber coarse comb marked "№ 839" and "Dom ..."
Refined white earthenware, including polychrome painted

ER 8 : Lensed ash and clay adjacent to filled shoreline

Underglaze transfer printed refined white earthenware
Undecorated refined white earthenware
Rimsherd of a clear pressed glass tumbler
Red earthenware, dark brown interior glaze

Disposition

The artifacts have been deposited with the New Castle Historical Society, and are housed at the old library museum, on Third Street in New Castle.